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No. 74



THE RAILWAY AND LOCOMOTIVE HISTORICAL SOCIETY

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Contents

Locomotives of the C. B. & Q. R. R.	6
Early History of the Chicago, Burlington & Quincy Railroad in Illinois	7
The Locomotives of the South Park R. R.	23
Locomotives of the Adirondack Railway Company	36
Howard Stillman, Western Railroader	39
Rails Among Peaks	41
New Books	63
Worth Reading	70

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When our railroads prepare to celebrate their centennial, it results in an examination of old files, papers and records; all to the advantage of the one who is interested in railroad history. This has been going on in the offices of the C. B. & Q. R. R. Mr. A. W. Newton, Consulting Engineer of that railroad, has prepared a series of papers covering the history of the little lines that formed that great road, the first on the Aurora Branch R. R. is presented herewith. For this privilege we are indebted to the kindness of Mr. Donald Ashton, the Executive Assistant of that road and to our energetic Resident Vice President, D. W. Yungmeyer. Furthermore, to our members in the Mid-west who have frequently complained at the lack of articles in our publication on these roads, let your Editor assure you that he lost no time in making arrangements for their publication.

To those of you that are interested in the Colorado railroads, you will find two interesting contributions. The one on the three little roads out of Durango, Colo. ought to appeal to many and the chapter on the South Park locomotives by Mr. Poor, from his work on that road, should fill a long felt want. We are sorry that we cannot publish the entire history of this road but the reasons therefor are set forth at the close of the article.

We welcome two new authors to our midst, Mr. David S. Weatherwax with his contribution on the Adirondack Ry. and Mr. Phillips with his brief account of Howard Stillman.

Locomotives of the C. B. & Q. R. R.

Many of our older members will recall the two publications of this Society, published in 1936 and 1937, covering in detail, the locomotives that were owned by this railroad. These publications have long since been out of print but, the C. B. & Q. R. R., has prepared a revised roster, together with such additions as have been made during the last ten years, that will bring the material that we published in Part I up to date, as of August 1, 1948. To the owners of our bulletins, this road has made the generous offer of supplying this material free of charge and applications for this list should be made to Mr. D. W. Yungmeyer, 5116 Dorchester Ave., Chicago (15), Illinois and, will you kindly include 6c for return postage.

Now, this reprint won't do you a bit of good unless you own copies of these bulletins, hence, please do not ask for this revision unless you do own copies. Furthermore, when you request this revision from Mr. Yungmeyer, will you please state the months that Parts 1 and 2 were published and in that way, he will know whether you do own copies of these bulletins.

Bulletin No. 72

In spite of all the care used by Mr. Stewart Graham, the author of this Bulletin, one or two errors have been found that should be corrected. On page 9, line 6, Great Bend was not renamed Hallstead. On page 10, the Passaic & Delaware R. R. extended from Summit to Bernardsville and the Extension, on the next line, connected Bernardsville with Gladstone. On page 37, the first "Ithaca" should be of the 4-4-0 wheel arrangement as found on page 30 and on page 134, the construction numbers for D. L. & W locomotives 1111-1114 should read 54636-54639. While we regret these errors, it is only fair to state that no manuscript was more carefully prepared and checked than this one but, as long as we are human, we will make mistakes.

Bulletin No. 71

Miss Barrett has called our attention to the following: Page 57, second paragraph, line 25, Stockton should read Darlington. Page 61, second paragraph, line 3, should read—"tubes open at one end to the firebox and to the chimney, etc." Same page, fifth paragraph, "Mr. Burstall" should be changed to "her builders." Page 62, the engines were made up in the following order: "Northumbrian" driven by George Stephenson; the "Phoenix" by Robert Stephenson; the "North Star" by Robert Stephenson, senior (brother of George); the "Rocket" driven by Joseph Locke; the "Dart" by Thomas L. Gooch; the "Comet" by Willard Alcard; the "Arrow" by Frederick Swanwick and the "Meteor" by Anthony Harding.

Early History of the Chicago, Burlington & Quincy Railroad in Illinois

By A. W. NEWTON,
Consulting Engineer, C. B. & Q. R. R.

Part One

AURORA BRANCH RAILROAD COMPANY

Chartered—February 12, 1849

Name Changed to Chicago and Aurora Railroad Company
June 22, 1852

According to the 10th Census of the United States (1880) there were 39.80 miles of railroad in the United States in 1830. By 1840 this mileage had grown to 2264.67 miles. This decade marked the beginning of the present great rail transportation system of this country.

During the next decade the Oregon Country was added to the Nation's possessions, giving continuous territory from the Atlantic to the Pacific Ocean. In 1846 California was acquired, and soon after (1848) gold was discovered in this territory; followed by tremendous Western migration of settlers, prospectors, and adventurers.

Necessity for adequate means of transportation soon became evident, and agitation for transcontinental railroads increased. From 1840 to 1850 the total railroad mileage in the United States increased from 2264.67 miles to 7310.44 miles,¹ and it was during this era that the Burlington railroad had its beginning, in the Aurora Branch Railroad.

AURORA BRANCH RAILROAD

February 12, 1849 to June 22, 1852

The first permanent settlement of the present city of Aurora was in 1834. Joseph McCarty, a millwright from Elmira, New York, with two hired helpers arrived in April of that year. His brother Samuel, usually considered the founder of the city, arrived in November. These men, together with their housekeeper and family—five men, one woman and three children—constituted the population within the present city limits at the end of 1834. The place was known first as McCarty's Mills, because the McCarty brothers built and operated a sawmill and a grist mill there. Samuel McCarty platted the town in 1835. In 1837 a post-office was established there and the town was named Aurora at the suggestion of an early settler from Aurora, New York.²

These pioneers, more than thirty miles removed from a market where products could be sold and needful goods might be purchased, desired transportation facilities that would avoid the long wagon haul then necessary.

The Galena and Chicago Union Railroad was then under construction, passing some twelve miles to the north, and agitation started for the construction of a line from Aurora to a connection with this road, thus giving access to Chicago, a rapidly growing metropolis, which already had a railroad connection with the Atlantic Coast. See Comment.

February 12, 1949, Lorenzo D. Brady, member of the Illinois Legislature from Kendall County, obtained a charter from the State for construction of the line, naming A. C. Gibson, Benjamin Hackney, Charles Hoyt, all from Aurora and Stephen F. Gale of Chicago, as commissioners for receiving stock subscriptions.³ February 21, 1849, the railroad was duly organized, capitalized at \$100,000.

The first directorate was elected, February 21, 1849, consisting of Stephen F. Gale, Benjamin Hackney, Charles Hoyt, William V. Plum, and Rodney McDole. Mr. Gale was chosen President.⁴

The following day the Board appointed John L. Hanchett, as Chief Engineer. He immediately began the survey of a line starting at Turner Junction, on the Galena and Chicago Union Railroad, passing through Batavia to Aurora, on the east side of the Fox River.⁵

Progress was such that on December 20, 1849 contracts were let for "grading, masonry, etc."⁶; the rail and other track material was acquired early in 1850 and locomotives and other rolling stock was on hand for the opening of the line in the fall. Track reached Batavia, six miles out of Turner Junction, about August 27, 1850, and was the occasion of a *Rail Road Celebration* held there, attended by many Chicago citizens as reported in the "Watchman of the Prairies," a Chicago paper, August 27, 1850, issue. Regular passenger service Chicago to Batavia was instituted September 2, 1850, consisting of one train each way per day, as announced in the "Chicago Daily Democrat" of August 31, which contained the following item:

"Aurora Branch Road—The cars will commence running on the Aurora Branch, as far as Batavia, on Monday next, the 2nd. of September. The cars leaving Batavia 6½ A. M. and this city (Chicago) at 4½ P. M. The unfinished portion between Batavia and Aurora will be finished in a few weeks."

Track reached Aurora, October 4, 1850 as stated by the "Chicago Daily Democrat" of October 7, in the following item:

"Aurora Branch Railroad—This road was completed to Aurora on Friday evening last. The Aurora Railroad celebration will come off the first of next month."⁷

Doubtless some passenger service was instituted at once, although regular service, consisting of two trains each way per day was not started until Monday, October 21, 1850, as announced in the "Aurora Beacon" and the "Chicago Daily Democrat":

"Aurora Branch Railroad—On and after Monday October 21st, the following arrangement will go into effect:

Leave Aurora	7 A.M. and 3 P.M.
Arrive (Chicago)	11 A.M. and 6 P.M.
Leave Chicago	8 A.M. and 3 P.M.
Arrive (Aurora)	10 A.M. and 6 P.M.

Fare:

Passenger \$1.25 from Aurora to Chicago
" \$1.10 " Batavia to Chicago."

From the above schedule it would seem that the train leaving Chicago at 3 P. M., and the one leaving Aurora at 7 A. M., because of longer schedules, were operated as combined passenger and freight trains, while the other two trains carried passengers only.

Because of difficulty in obtaining stock subscriptions to this project, and the failure of many subscribers to fulfill their contracts, the road soon found itself in financial difficulties. March 25, 1850 the directors adopted a resolution authorizing,

"The President and John Frink, Esq. to make such a temporary loan as may be required for the construction of this road."⁸

According to Mr. Lorenzo D. Brady, a director of the road, in "His History Written by Himself"⁹ an issue of bonds was resorted to, for he says:

"The grading was finally completed from Aurora to Turner Junction, and now came the tug of war! How to get the road equipped—it was finally decided to issue bonds. These bonds (\$45000) were guaranteed by the Directors (of which I was one at the time)."

The directors however were not called upon to fulfill their guarantee, for by May 1, 1855 the bonds were paid in full out of the earnings of the road.¹⁰

According to a report of the Chief Engineer, Mr. J. L. Hanchett, submitted February 21, 1850,¹¹ the line was estimated to cost, not including equipment, \$93,237. The only record of actual cost is to be found in the "Burton Historical Collection" in the Public Library at Detroit, Michigan. There it is stated that the cost of construction of this line was \$125,868.77. With a capitalization of \$100,000, of which less than \$50,000 had been subscribed, and with a project under way, it is easy to visualize the financial worries confronting these pioneer railroad builders, but with the meager proceeds from sales of stock and bonds, these men, for their courage and energy saw the completion of the line, its profitable operation, and enjoyed liberal profits on their investment. The same courage and energy prompted them to extend the road westward.

March 26, 1850, the Board

"Resolved, that it is the desire of the directors of this company to extend the Aurora Branch Railroad to the most feasible point on the Illinois River, as soon as possible."¹²

La Salle and Peru were considered. At that time the Illinois Central was building its line from Cairo to Galena, crossing the Illinois River, just north of La Salle, and passing through Mendota. Eventually the extension was built from Aurora to Mendota.

During its construction, the Aurora Branch experienced its first labor troubles. In the "Aurora Beacon" of May 5, 1850 appeared the following item:

"A Strike

Some fifty hands came to a standstill on the Aurora Branch Railroad on the 1st for higher wages. The present rate is 75 cents, and they demanded an additional *shilling*.¹³

How the strike was settled is not stated, but this was the first strike occurring on what was later to be known as the Chicago, Burlington & Quincy Railroad.

On February 21, 1851, less than six months after the road was opened for business, the Board

"Resolved, That Benjamin Hackney settle the account presented to the board by Alvah Fuller, for damages done to his buggy in transporting the same from Chicago to Aurora, by allowing him an amount not to exceed five dollars."¹⁴

This was the first recorded traffic claim in the history of the company.

In spite of the difficulties encountered, and the undeveloped state of railroading at that time, the judgment of the promoters of the line must be acknowledged to have been good, for shortly after the close of the first year's operation the Board declared "a dividend of ten per cent, out of the nett (sic) earnings of the road, ending October 31, 1851." Only stockholders who had paid 75% and over on their purchase contract were to participate in this dividend.¹⁵ This dividend was paid in stock of the company, leaving the cash available for payment of debts.

It is an interesting fact, although a rather exceptional one, that no purchaser of either stock or bonds in this company suffered any financial loss due to repudiation of its financial obligations, either as to stock or bonds.¹⁶

Because of the limited available cash and of a general stringency in the money markets, this company was forced to resort to extreme economic measures during construction and early operation. It will not be amiss to cite some of the problems confronting the management of the road, and the measures taken to meet them.

TRACK

In its construction, rail was an important item. Two types were then in use: Strap rail laid on wood stringers and cross ties, and T-rail laid on cross ties. The Chief Engineer, Mr. Hanchett, in his report¹⁷ recommended *strap rail*, because on the twelve mile line proposed a saving of \$40,000 could be made; the Board approving his recommendations. Not only was this done for economical reasons, but also because second-hand rail of this type could be purchased and be immediately available, while new rail, either *strap* or *T* could only be obtained at high cost. Furthermore, delivery would be very slow, thus delaying the completion of the railroad.

Another reason for the use of strap rail—one that may have made its use desirable—was that the Galena and Chicago Union Railroad, over which the Aurora Branch Railroad expected to operate its trains between Turner Junction and Chicago, was laid with rail of this type.

John Van Nortwick¹⁸ of Batavia, Illinois, was Chief Engineer of the Galena and Chicago Union Railroad during its construction, and it was on his recommendation that strap rail was laid on that line. He became a director on the Aurora Branch Railroad in 1849.¹⁹

From historical records of the New York Central Railroad, from which this second-hand strap rail was purchased, and from a History of the Chicago and Northwestern Railway Company, together with the Director's Records of the Aurora Branch Railroad, it is possible to set up a complete chronological story of the first rail laid on this Branch, and the history of this line would not be complete without it.

The Niagara Falls Railroad built in 1838 was laid with strap rail. In 1847, the Legislature of New York State passed an act that established a minimum weight of rail of 56 pounds per yard on all roads in that State, and set a three year limit for replacement of lighter rail in existing tracks, under penalty of charter forfeiture.²⁰

In 1850, when the Aurora Branch was building, replacement of rail on New York State roads was already under way, and the strap rail being released was available for purchase.

In 1848, John Van Nortwick, Chief Engineer of the Galena and Chicago Union Railroad, submitted a report dated April 5th, to the directors of that road giving a detailed description of track as constructed with strap rail, which follows:

"The superstructure of the road upon which the present estimate is based is composed of cross ties nine feet long and six inches thick, which are to be laid thirty inches center to center. On these are to be placed longitudinal rails of Norway or Yellow Pine, a portion six inches square and a portion seven inches square, secured in place by triangular blocks or knees of scantling, firmly spiked to the ties on each side. Upon the longitudinal rails is oak ribbon one and a quarter by three inches square, and on this ribbon an iron plate rail two and a half by three-fourths or seven eighths inches, and weighing about thirty tons to the mile."²¹

In 1922, while excavating for abutment foundations for New York St. Subway, in connection with Aurora Track Elevation, a piece of original track was uncovered at a depth of about five feet, consisting of this strap rail, the wood girders and oak cross ties, still in a good state of preservation after lying there for over 70 years. This track was of the same design of the sketch herewith, and from its location, must have been a side track that is known to have served the E. F. Allen Warehouse on Block 7, Town of Aurora, for it is recorded that in 1853 the strap rail originally laid in main track was relaid with a very heavy compound continuous rail of the "T" type.

Although there is no existing description of track as constructed on the Aurora Branch, it may be assumed that it was the same as on the Galena and Chicago Union for the following reasons: (1) The dimensions of the strap rail are the same as those of existing samples of rail laid on the Aurora Branch; and (2) when this track was laid in 1850, Mr. Van Nortwick was on the board of directors of that branch, and being an engineer doubtless had something to say about the type of construction, extending the methods followed on the Galena and Chicago Union to the Aurora Branch.

March 26, 1850 at a meeting of the directors of the Aurora Branch Railroad, it was

"Resolved, That proposition of W. A. Bird, Esq. of the Niagara Falls Railroad Company, be accepted, which is as follows—Fifty-two dollars and fifty cents per ton for the iron required for this road."²²

At this same meeting, it was

"Resolved, that the President be authorized to negotiate (sic) for the required amount of Norway Pine Rails, for five and one half miles of this road."²³

which further indicates adherence to the type of construction as adopted for the Galena and Chicago Union Railroad.

May 5, 1850 there appeared in the Aurora Beacon the following item:

"Iron has been purchased, and is being shipped from Buffalo."²⁴

In October, 1850, track was completed from Turner Junction to Aurora. The second-hand strap rail continued in use until 1853, when it was replaced with T-rail of about 70 pounds per yard, or about 120 tons per mile of track, as compared with about 30 tons of strap rail.

MOTIVE POWER

The history of locomotives on the Aurora Branch Railroad is limited to a few units, because of short existence of the line under this name; of the limited length of road; and few trains operated.

It is, however most interesting because of the types of locomotives used, which were of the earliest designs developed, following the introduction of steam propelled engines, which made rail transportation possible and practicable.

Locomotives on the Burlington, and its predecessor companies, have been the subject of much historical research. The Baldwin Locomotive Company, in its magazines of October, 1926; January, 1927; and April, 1927, contained valuable information in articles on "The Locomotives of the Chicago, Burlington & Quincy Railroad" by Paul T. Warner. The most exhaustive study, however, is that made by The Railway & Locomotive Historical Society, Inc., of Boston, Mass., which issued in March, 1931, BULLETIN No. 24, giving a brief history of the road and its locomotives. This was followed by a bulletin on "Locomotives of the Chicago, Burlington & Quincy Railroad, 1904 to 1935" issued in 1936; and by another of the same subject covering the years 1855 to 1904, issued in 1937.

For many years there has been a persistent rumor that the first engine to run on the Aurora Branch was the "Pioneer," (a ten ton 4-2-0 type, wood burner. This locomotive was built in 1836, by M. Baldwin, founder of the Baldwin Locomotive Works, and called the No. 7). Subsequently it was sold to the Michigan Central Railroad, about 1845, and named the "Alert." In 1848 it was acquired by the Galena and Chicago Union Railroad, then building westward from Chicago, and named the "Pioneer." According to the records of the Baldwin Company,

this was the thirty-seventh locomotive built by that company and was a type almost exclusively produced up to 1842.

The "Pioneer" was the first locomotive to enter Chicago, and the first to run west of there, operating between that City and Elgin, Illinois on the Galena and Chicago Union Railroad. In its history, the Baldwin Company says:

"Among the first locomotives used by the Burlington was the 'Pioneer' apparently leased from the Chicago and Galena Union (Galena and Chicago Union) Railroad. Its first service on the Burlington system was probably on the Aurora Branch Railroad."

Diligent search has failed to disclose the existence of such a lease, but because of the friendly relations between the two roads, it is quite probable that an operating arrangement on a stipulated rental rate existed, and that the engine was used during construction and even during the early operation of passenger train service, for the Galena road had at that time acquired heavier engines and of a different type (4-4-0) for operating its line to Elgin.

Speaking of this engine, the Chief Engineer of the Galena and Chicago Union, Mr. John Van Nortwick, in the annual report of that road, March 5, 1859 said:

"The company have on hand one second-hand locomotive which is in good order . . . This locomotive was named 'Pioneer.'"²⁵

This engine, it seems, was in good order, and from the records, apparently not in regular service.

The Aurora Branch was under construction in 1849 and 1850, and so far as records disclose had not yet acquired any motive power. It seems reasonable, therefore, that the "Pioneer" did run on the Aurora Branch, as rumored, not only during its construction, and doubtless in regular train service after the opening of the road to Batavia and later to Aurora.

John J. Hill, a veteran C. B. & Q. employee, in a letter early in 1937 reminisced about the early days of the Burlington, and the men in its service. In this letter, printed May 2, 1937 in the "Aurora Beacon-News"—Charles Pierce Burton's "Now and Then" column—he says:

"They had small two wheeled driver road engines in those days."

Mr. Hill, in writing of this type of engine, uses the plural, indicating that there were more than one of them in service on the Aurora Branch. So far as records disclose, there were but two 4-2-0 engines west of Chicago; the "Pioneer" owned by the Galena and Chicago Union Railroad, and the "Pigeon" owned by the Aurora Branch Railroad, both of which were acquired from the Michigan Central Railroad.

From available information, it would seem that the "rumor," so long persistent, that the "Pioneer" was the first engine to run on the Aurora Branch was not without foundation. This engine, now over one hundred years old, is still in existence, having been preserved in its original state by the Chicago and Northwestern Railway Company. It is now permanently housed in the "Museum of Science and Industry" in

Jackson Park, Chicago, and was an interesting exhibit at the World's Columbian Exhibition in 1893; again at the St. Louis World's Fair in 1904 and later at the Century of Progress Exposition in Chicago in 1933 and 1934.

It seems to be a well established fact that the *first* locomotive to be *owned* by the Aurora Branch Railroad was the "Whittlesey," or as spelled in some records "Whittelsey," and later (1853) traded to the Galena and Chicago Union Railroad for the "Winnebago" which was afterwards known as the No. 1. It was built by Norris & Bros. in 1849—had 4 drivers and weighed 12 tons. Since it was purchased from the Buffalo and Niagara Falls Railroad in 1850, it is assumed it was built for that company, and probably was too light for service on that line, hence its sale to the Aurora Branch Railroad.

In its publication, 1937, the Railway and Locomotive Historical Society, after discussing the various early locomotives owned by the Burlington announced this conclusion:

"On account of its small size and the name, it is our opinion that the 'Whittlesey' was the first engine *used* on the Aurora Branch Railroad."

Had the word *owned* instead of *used* been used, it seems the statement would have been more correct; for Mr. Lorenzo D. Brady in a story of his life written between 1864 and 1874 said:

"We also purchased a second hand engine called the 'Whittlesey.'

Early in May, 1850, the president of the road, Mr. Gale, and a director, Mr. Hackney, went east to negotiate for locomotives and cars, ("Aurora Beacon" May 9, 1850). The "Chicago Daily Journal," Tuesday evening, October 8, 1850 and the "Chicago Daily Democrat," October 9, 1850, contained items announcing the arrival at Chicago in the Brig "Patrick Henry," of a "splendid locomotive for the Aurora Branch Railroad."

This doubtless refers to the "Whittlesey." The Journal item also stated "This is the sixth locomotive on the lines West, to Fox River." The "lines West, to Fox River" must have referred to the Galena and Chicago Union Railroad and the Aurora Branch Railroad, the only lines then built out of Chicago westward.

From available records only five of these six engines can be identified and are: the "Pioneer," the "Chicago," the "Elgin" owned by the Galena and Chicago Union Railroad; and the "Whittlesey" and "Pigeon" owned by the Aurora Branch Railroad.

Sometime in October, 1850, the "Pigeon" was acquired from the Michigan Central Railroad. It was a 4-2-0 engine of the "Pioneer" type, weighed 14 tons, and like all engines in those days, a wood burner. It was built by M. W. Baldwin in 1837. According to the Railway and Locomotive Historical Society's publication of 1937, the probable history of same is that it was Baldwin's No. 93, built for the State of Michigan, when that State owned what is now the Michigan Central Railroad, and was acquired by that road, when sold to the Forbes' interests, and later, 1850, purchased by the Aurora Branch Railroad, about the

time of opening of road for operation in October. It remained in service until 1861.

After the opening of the road, and until 1852 when it became the Chicago and Aurora Railroad, there were no further additions to the company's power. However, about the time of this change of name additional locomotives were acquired. The third locomotive to be acquired was the "Rocket," a 4-4-0 type, built by Hinkley and Drury in 1847 and purchased from the Michigan Central Railroad sometime after July 16, 1852, for on that date the directors of the new company (Chicago and Aurora)

"Resolved, That the communication of John W. Brooks, Superintendent of the Michigan Central Railroad, in regard to the locomotive 'Rocket' be referred to the executive committee, with power to act."²⁶

It seems clear that the "Rocket" was acquired from the Michigan Central and that it was first operated between Chicago and Aurora, and probably in construction service on the Aurora-Mendota "extension," for this line was not completed until October, 1853, over a year later.

STOCKS AND BONDS

The original capital stock of the Company was, by Act of Legislature, to be one hundred thousand dollars. Shares to have a par value of one hundred dollars.

July 8, 1851, the capital stock was increased to \$600,000 by action of the Stockholders.²⁷

That the Aurora Branch proved a good and profitable adventure for its promoters and stockholders, is well established. The little twelve mile line during its short existence paid stock and cash dividends amounting to 35%, and when it became the Chicago and Aurora Railroad, the stockholders exchanged their stock on basis of one and two-thirds shares of the new stock.

The first bonds issued against what was later to become a part of the Burlington System, were Aurora Branch Railroad bonds, amounting to \$45,000. They were 7% Mortgage Bonds, maturing in 5 years.

By the time grading and bridging for the road bed had gotten well under way, it became evident that completion of the line could not be accomplished with the limited funds gradually being paid by subscribers to the stock of the Aurora Branch.

April 25, 1850, the Board of Directors

"Resolved, That, for the purpose of insuring the completion of the Aurora Branch Railroad to the Village of Aurora of an earlier date than can be accomplished by payments from stockholders . . . the President and Secretary of the Company are hereby authorized to issue bonds of this Company to an amount not exceeding Forty-five thousand dollars, and for a period not exceeding five years from date of issue, and at a rate of interest not exceeding seven per cent per annum."²⁸

The form of this bond is of record in the minutes of Board meeting April 25, 1850.²⁹ Provision was made for exchange of bonds for full paid shares of Capital Stock of the Company on or before one year from

date of issue. These bonds were issued as of May 1, 1850 and payable one, two, three, four, and five years from date.

April 25, 1850 the President (Gale) and Acting Director (Hackney) were

"Authorized to negotiate (sic), sell and dispose of said bonds for iron (rail), engines, cars, or for cash to be applied in construction of said Road."³⁰

At Board meeting September 25, 1850 the committee submitted the following report which was accepted:

"The undersigned appointed by resolution dated April 25, 1850, to negotiate (sic) the Bonds of this Company to the extent of Forty-five thousand dollars would respectfully report:

"That Eight thousand dollars of the Bonds were left with the Chemung Canal Bank as security for the payment of six thousand eight hundred dollars cash received, and payable on the 1st November, 1850.

"Twenty-five thousand were negotiated (sic) with the Niagara Falls Railroad Company for iron (rail), and twelve thousand negotiated with Rufus King, Esq. of Albany, N. Y. For particulars of the foregoing, reference is made to report 'B' of S. F. Gale of this Date.

S. F. Gale, President
B. Hackney, Acting Director"³¹

Report "B" is not of record, so disposition of the amount sold to Mr. King can only be surmised.

Immediately following the issuance of these Bonds, the Committee (Messrs. Gale and Hackney) left for the East. "The Aurora Beacon" of May 9, 1850, contained the following item:

"Messrs. Gale and Hackney have gone East to negotiate for locomotives and cars."

Mr. Alonzo D. Brady in his "History of Himself" said:

"We also purchased a second hand engine called Whittlesey and also a second hand passenger coach and a few freight cars."

Therefore, it seems that the Bonds (\$12,000) sold to Rufus King, Esq. were to pay for the rolling stock above mentioned.

Prior to May 1, 1855, when the last of these Bonds were to fall due, \$20,000 had been paid out of the road's earnings, for in the first annual report issued by the Chicago, Burlington and Quincy Railroad Company in the spring of 1855, the President, Mr. James F. Joy, said that the \$25,000 of unpaid bonds of the Aurora Branch would be paid on May 1st out of earnings.

Mr. Alonzo Brady stated in his history that the Directors of the Company personally guaranteed the payment of these bonds. No record has been found to corroborate this, unless a statement contained in the resolution of the Board April 25, 1850, authorizing the issuance of these bonds can be so construed. The statement says:

"For the more perfect security of the payment of the Bonds negotiated (sic) or disposed of, the President and Directors of this Company, severally, irrevocably pledge the property and interests of the Company in and to said road, and the revenues derived therefrom."³²

PERSONNEL

The story of the Aurora Branch Railroad would not be complete without reference to the men who, by their energy and financial aid, accomplished its building.

*Lorenzo D. Brady*³³ was born January 19, 1810, in Westchester County, New York. At the age of twelve he, with his parents, moved to New York City. There, after working for five years as a clerk, he went into business for himself. In 1837 he moved west, locating first at Big Rock, Illinois, where he engaged in farming for two years. He then moved to Little Rock, a few miles away, and operated a general merchandise store until he was elected Representative to the Illinois Legislature in 1848. During the same year he moved to Aurora, where he spent the remainder of his life, active in business and civic affairs until his death in 1893. He was elected Mayor in 1860, (?) helped to establish the first free school in Aurora, which was also the first in Illinois, and today one of the finest school edifices in the city bears his name.

During the years 1864 to 1877 he wrote "Lorenzo Dow Brady's History" from which the following quotation, in regard to his connection and interest in the Aurora Branch Railroad, is taken:

"The winter of 1849 (48 and 49) I went to Springfield having been elected to the Legislature from Kendall County.

"While in Springfield, I drew up a bill and introduced it into the Legislature. This bill was subsequently passed for a charter for a railroad from Aurora to connect with the Galena (now the Northwestern) at or near Warrenville. When built the junction was made at what is now Turner Junction. This charter is the original of what now constitutes the Chicago, Burlington & Quincy Railroad.

"Sometime after, sufficient stock was subscribed to warrant the commencement of the work. The grading was finally completed from Aurora to Turner Junction and now came the tug of war! How to get the road equipped—it was finally decided to issue bonds. These bonds were guaranteed by the directors (of which I was one at the time).

"From their sale we succeeded in purchasing a quantity of second hand flat rails, to iron the road, from the Buffalo and Niagara Falls Railroad, this road being about to relay their road with the "T" rail just being introduced.

"We also purchased a second hand engine called the 'Whittlesey' and also a second hand passenger coach, and a few freight cars.

"This inaugurated what is now the C. B. & Q. Railroad."

*Stephen F. Gale*³⁴ a director of the Aurora Branch Railroad during its existence, and its first President in 1849 and 1850, and again in 1852, was a citizen of Chicago, active in civic affairs, was elected Chief of the Chicago Volunteer Fire Department, serving for five years, until 1848, and in that year was urged by a Citizens' Committee to become a candidate for Mayor, but he declined to enter the field of politics. He was active in the promotion of the Galena and Chicago Union Railroad in 1836, and in 1849 became interested in the building of the Aurora Branch Railroad, acquiring also considerable real estate holdings in Aurora. His active service with the road ceased in 1854.

*Elisha S. Wadsworth*³⁵ was the second President of the Aurora Branch, serving during the year 1851. He was a resident of Chicago and served as a director of this road during the years 1850-51 and 52. He was active in the early wholesale dry goods and grocery business, as well as interested in grain and meat packing business. When the Chicago Board of Trade was organized in 1848, he became a member and director. He was active in civic matters, but was not interested in holding public office. After his retirement from active commercial life in 1853, he devoted himself to his farm near Waukegan, Illinois, and his other real estate interests until his death in 1891.

John Van Nortwick,³⁶ a resident of Batavia, Illinois was an engineer by profession. Born in Washington County, New York, April 5, 1809, at the age of 27 he came to Batavia to visit his father who had settled there and was engaged in profitable business activities. In 1846, he with his family likewise settled in Batavia. With his early engineering experience he was well qualified to undertake railroad construction work, then in active development in this area. February 8, 1848, he was appointed Chief Engineer of the Galena and Chicago Union Railroad, continuing in this capacity until May 2, 1854, when he was elected its President and Chief Engineer, in which capacity he served until January, 1855. In the meantime, 1849, he was elected a director of the Aurora Branch Railroad and according to "Biographical and Historical Records of Kane County, Illinois" (1888) "he was tendered and accepted the position of *consulting engineer*." While there is nothing in the records of the company to confirm this, yet because of his well-known engineering ability and the fact that later, in 1862, he was by action of the Board of Directors "authorized to act as Chief Engineer" in the construction of the line from Aurora to Chicago, via Naperville, it is quite probable that he did act in an advisory capacity concerning engineering matters during his long and active connection with the railroad. This connection began in 1849 and ended in 1863. He served continuously as its President from 1857 to 1863. His ability, both as an engineer and as an executive, was recognized by the eastern financial interests, which assumed control in 1852, under John M. Forbes, James F. Joy, and John W. Brooks, who himself was an eminent engineer.

*Benjamin Hackney*³⁷ came to Aurora in 1847 from Chemung County, New York. He soon became interested in the Aurora Branch Railroad, then being promoted, and was one of its directors from its organization until 1852. He was one of the Directors guaranteeing the first issue of bonds. Neither he nor any of those who gave this guarantee were called upon to fulfill it. He was prominent in early affairs of Aurora, was a stockholder in the railroad company, and for a time was its *Acting Superintendent*. He served in the Illinois Legislature and also was one of the promoters of Clark, now called Jennings Seminary.

John Frink,³⁸ a director of the Aurora Branch Railroad and its successor the Chicago and Aurora Railroad during the years 1850 to 1853. Born October 17, 1797, moved to Chicago in 1836, where he

established extensive Stage Routes—first between Chicago and Ottawa, Illinois; then between Chicago and Galena, Illinois, via Freeport; followed by a route Chicago to Madison, Wisconsin. Originally the John Frink and Company, and later known as Frink and Walker, became one of the most important concerns in the Northwest, extending its operations to Des Moines, Iowa and Fort Snelling, Minnesota. Through operations which included U. S. Mail contracts, he amassed a considerable fortune. With his transportation experience, it was but natural that he should enter the railroad field which was a rapidly growing industry. He was active in construction of the Galena and Chicago Union Railroad; became connected with the Aurora Branch during its construction and later with the Chicago and Aurora Railroad; and likewise with the Peoria and Oquawka and Peoria and Bureau Valley Railroads. Although the records do not disclose a contract between the Aurora Branch Railroad and his stage company, the minutes of Aurora Branch Directors meetings indicate an agreement of this nature, for they record actions of the Board concerning movement of equipment and employes of Mr. Friull, as well as handling claims of various natures. His death occurred in Chicago in 1858 at the age of 61.

CLOSING DAYS OF THE AURORA BRANCH RAILROAD

During the building and placing in operation of the Aurora Branch Railroad, the Company was planning an extension from Aurora, westward.

March 26, 1850 the Board

"Resolved, That it is the desire of the Directors of this Company to extend the Aurora Branch Rail Road to the most feasible point on the Illinois River, as soon as practicable." ³⁹

and on April 15, 1850 by resolution, the Board directed that a survey and estimate of cost be made.

February 21, 1851, the Stockholders

"Resolved, That the Directors of the Aurora Branch Railroad Company be requested to take such immediate measures as will ensure a connection of said road with the Galena Branch of the Central Railroad . . ." ⁴⁰

On this same date at the Directors meeting it was

"Resolved, That the President and S. F. Gale be and are hereby authorized to make and enter into such arrangements, agreements, or contracts, as they may deem for the best interests of this Company, with the Galena and Chicago Union Rail Road Company, or any other company or companies, for the purpose of uniting or consolidating this company, with said Galena and Chicago Union Railroad Company, or such other company or companies, or any arrangement, agreement or contract in reference to the operation or extension of this Road, such agreement or contract to be submitted to this Board for approval." ⁴¹

Following the opening of the Branch for traffic, its trains were operated over the Galena and Chicago Union between Turner Junction and Chicago under some sort of mutual understanding, for it was not until December 31, 1851, that an operating agreement was signed, to go into effect January 1st, 1852.

From the resolution of February 21, 1851, it seems evident that a consolidation of the Aurora Branch with the Galena and Chicago Union was contemplated, but for reasons, probably financial, was abandoned; and, instead, a plan was followed, that made possible the building up of the present Burlington System, for had the consolidation been effected, the Aurora Branch and its extension to Mendota would have been a lateral or branch line of the Galena and Chicago Union, with little prospect of further extension, because the main line was already under construction across the State of Illinois.

Thus the first "crisis" in the formation of the Burlington System was passed, and the alternate plan developed.

December 16, 1851, the Board of Directors

"Resolved, That the President of this Company is hereby authorized to execute, using the seal of the Company, a good and sufficient lease from the Galena and Chicago Union Railroad Company for the right of constructing a lateral road from the 'Junction' in DePage County to the Galena Branch of the Central Railroad."⁴²

In its charter of January 16, 1836, the Galena and Chicago Union Railroad, among other provisions, obtained the right to "construct, maintain and use such other Lateral Routes as may be deemed advantageous and . . . as may be deemed expedient."

January 13, 1852, this "good and sufficient lease" was executed by the President and was reported to the Board at its meeting February 7, 1852. Copy of this lease is recorded in the minutes of the Board of this date, and contains the following:

"And whereas the Directors of said Galena & Chicago Union Rail Road Company have adopted the said lateral route, and in a due, proper and authentic form and manner have decided to construct, and have in such manner declared their intention to be, to construct a railroad upon such lateral route from this road, near said point thereof known as the Junction, to a point on the Galena Branch of the Illinois Central Rail Road, at or near section thirty-three in township thirty-six north, in range one East; there to connect with said Galena Branch of said Illinois Central Railroad; which said lateral route is to be known and is called upon the books of said Galena & Chicago Union Railroad Company, the South Western Branch of the Galena & Chicago Union Railroad."⁴³

The terminus above described made the connection with the Illinois Central at Mendota, to which point the Aurora Branch extension was later built. Thus with its priority of right to construct this lateral line, it became necessary for the Aurora Branch to negotiate this lease, which is in perpetuity, not so much for the right to build, but to forestall the possibility of a competitive line between those two points.

With this problem disposed of, the way was cleared for the Aurora Branch Railroad to put its plan into effect. Accordingly one of the last important acts of the Directors occurred at a meeting of the Board February 23, 1852, when it was

"Resolved, That in the opinion of the Board, the interests of this Company demand the early extension of the road from Aurora to the proposed connection with the Galena Branch of the Illinois Central Railroad, and the Board will take immediate measures to the accomplishment of this object."⁴⁴

On June 22, 1852, under a special act of the Illinois Legislature the name of the Company was changed from the Aurora Branch Railroad Company to the Chicago and Aurora Railroad Company, with authority to extend its line "from Aurora to the Illinois Central Railroad" then building from LaSalle through Mendota to Galena; and the Aurora Branch Railroad Company ceased to exist."

Documentation for A. W. Newton, **Early History of the Chicago Burlington & Quincy Railroad in Illinois, Part I, "Aurora Branch Railroad"**

1. J. L. Ringwalt, *Development of Transportation in the United States* (New York, 1888) pp. 75-115.
2. Charles P. Burton to A. W. Newton, December 30, 1938.
3. Charter to Aurora Branch Railroad Company, Sec. 4, in Chicago, Burlington & Quincy, *Documentary History*, (Chicago, 1928) Vol. I, p. 12.
4. Minutes of Stockholders' and Directors' Meetings in Aurora Branch Record Book No. I, pp. 1-2.
5. *Ibid.*, p. 2.
6. *Ibid.*, p. 6.
7. *Chicago Daily Democrat*, October 7, 1850.
8. Minutes, *loc. cit.*, p. 10.
9. Lorenzo D. Brady, *His History Written by Himself*, (longhand document written 1864-1877). A copy of this history is in the possession of his granddaughter, Mrs. Olive Beaypre Miller, of Chicago.
10. President James F. Joy, Report to Stockholders, May 1, 1855, in CB&Q Annual Report for year ending April 30, 1855, p. 7.
11. J. L. Hanchett, Chief Engineer's Report, February 21, 1850, printed in *Aurora Beacon News*, February 28, 1850.
12. Minutes, *loc. cit.*, p. 10.
13. *Aurora Beacon News*, May 5, 1850.
14. Minutes, *loc. cit.*, p. 21.
15. *Ibid.*, p. 32.
16. The bonds were paid in full May 1, 1855. See Joy, *loc. cit.*
17. Hanchett, *loc. cit.*
18. C. T. Dike, Chief Engineer, C. & N. W. Ry. Co. to A. W. Newton, November 23, 1938.
19. Minutes, *loc. cit.*, p. 9.
20. Frank Walter Stevens, *Beginnings of the New York Central Railroad*, (New York, 1926) p. 299. G. Putnam & Sons (Knickerbocker).
21. Wm. H. Stennett, *Yesterday and Today—A History of the Chicago and Northwestern Railway System*. (Chicago, 1910) pp. 15-16.
22. Minutes, *loc. cit.*, p. 9.
23. *Ibid.*
24. *Aurora Beacon-News*, May 5, 1850.
25. Stennett, *op. cit.*, p. 16.
26. Minutes, *loc. cit.*, p. 49.
27. *Ibid.*, p. 22.
28. *Ibid.*, p. 12.
29. *Ibid.*, p. 13.
30. *Ibid.*, p. 12.
31. *Ibid.*, p. 15.
32. *Ibid.*, p. 12.
33. *Commemorative Biographical and Historical Records of Kane County, Illinois*, (1888) Vol. I. Cited by Charles P. Burton to A. W. Newton, December 30, 1938. (In Batavia Public Library).
34. A. T. Andreas, *History of Chicago*, (Chicago, 1885) Vol. II, p. 488.
35. Elisha S. Wadsworth, *Biographical Sketches of the Leading Men of Chicago*, (Chicago, 1868) p. 181.

36. Kane County Records, Vol. I.
 37. *Ibid.*
 38. *Album of Genealogy and Biography, Cook County, Illinois*, (Chicago, 1905) p. 139.
 39. Minutes, *loc. cit.*, p. 10.
 40. *Ibid.*, p. 20.
 41. *Ibid.*, p. 21. This resolution seems to indicate that thoughts of the directors included a possible consolidation with the Galena and Chicago Union Railroad. It was a wise provision, for at that time that road was apparently in position to block efforts to extend the Aurora Branch Railroad westward, having already taken necessary steps toward construction of such a line.
 42. *Ibid.*, p. 33. This resolution shows the necessity of negotiations between the Galena and Chicago Union and the Aurora Branch Railroad, and it was indeed fortunate that the two roads were on most friendly terms.
 43. *Ibid.*, pp. 34-35.
 44. *Ibid.*, p. 41.
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Editor's Comment: Anent the Author's statement at the outset of this paper concerning the rail connection that Chicago had with the Atlantic Coast. The Michigan Central R. R., building westward, reached New Buffalo, on Lake Michigan, April 23, 1848. From New Buffalo, passengers were carried to Chicago via steamer. On May 28, 1848, the steamboat "Mayflower" was placed in service on Lake Erie and passengers were carried to Buffalo, where connections were made with the chain of railroads extending across New York State that now form the New York Central System. It is this rail and steamer service that the author refers to in his paper for it was not until 1852 that the railroads reached Chicago.

The Locomotives of the South Park R. R.

By M. C. POOR

"By their whistles you shall know them—
And you shall never forget them."

In common with most all railroad histories the locomotive roster seems to be of paramount interest; the South Park and Colorado Central rosters are no exception. Throughout the South Park's lifetime, an even 100 different engines ambled up and down the road's slim gauge rails. While over on the Clear Creek Division, 15 different narrow gauge engines carried the name "Colorado Central" into the Georgetown and Central City mining camps. It is interesting to note, especially by those interested in old locomotive power, that the 101 different engines incorporated in the combined rosters of the South Park and Colorado Central roads were built prior to 1899.

The gathering of the material that went into this roster proved to be an arduous task and could have never been achieved without the able assistance of Messrs. Chas. E. Fisher, Robert R. Hicks, Richard Kindig, S. R. Wood, Jackson C. Thode, Jesse Frazier, Miss Ina T. Aulls of the Denver Public Library, Guyon C. Whitley, T. B. Aldridge, John Maxwell, A. T. Million and George Lundberg of the Colorado & Southern Engineering Department, William Cairns, William Wendell,¹ Thomas St. John and others. The writer is greatly appreciative of the valuable assistance given by these persons. Relative to any un-answered questions or possible errors, the Society welcomes any additional information or corrections.

Beyond a general discussion of this varied assortment of locomotive power there is not a great deal to say as practically all the data collected is incorporated within the roster itself. After getting all the miscellaneous assortment of material assembled, a few complex questions arose, some of which we have been unable to solve. Among these missing answers is the disposition of certain engines; eg., in the Denver Daily Times of October 26, 1899, we read the following:²

LOCOMOTIVE NUMBER 1 OF THE SOUTH PARK LINE SOLD TO A LUMBER CAMP OUTFIT

"Engine number 1, the pioneer of the South Park line, was loaded for shipment to the lumber region of Wisconsin yesterday. This was the last of the old lot of locomotives first sent to Denver for use on the old mountain line. It has been reported that this engine was built too high and toppled over sometimes."

Upon reading this news item one is inclined to wonder just which number 1 does the article refer to—D. S. P. & P. no. 1, or C. & S. no. 1? The Omaha office of the Union Pacific reports that D. S. P. & P. no. 1 was dropped from the roster in 1888, and from what little information that

¹ Deceased.

² Courtesy D. B. Sandford.

has been uncovered, we are fairly certain that old number 57, the "Buena Vista," was rebuilt to Colo. & Sou. number 1. Irregardless of the peculiar wording of this item, the writer is of the belief that the newspaper was referring to C. & S. number 1.

Further concerning this disposition, the following letter was received from Mr. T. B. Aldridge. Undoubtedly the engines he refers to are South Park engines, but their identity is lost. Mr. Aldridge writes:

"I have one lone photograph (negative lost) of three engines taken at Palisades, Nevada, on the old line of the Eureka-Nevada R. R. These narrow gauge engines had been damaged by a fire, with their cabs burned off, etc. One of the engines had the words "Union Pacific" cast on the side of the valve chamber or steam chest. Another engine had the letters "U. P. D. & G." cast on one pair of driving wheel tires. These engines were cut up and sold as scrap iron to Japan in 1938."

We have already told the story of the South Park's first new engine, the "Fairplay," its purchase from the builders, Dawson & Bailey (National Locomotive Works), and its subsequent delivery in Denver on May 31, 1874. Mr. F. P. Roesch, Vice President of The Standard Stoker Co., who was at one time General Road Foreman of engines for the old Union Pacific Denver & Gulf during the 90's, writes:

"The South Park's first engine as I recall, was a 2-6-0. The cylinders were quite small, being about 11x16. During my first connection with the South Park, which was in 1881, engine no. 1 was not in general use on the main line but was used mostly on the Morrison branch. As I remember, this engine was still in service as late as 1886. I also recall that no. 2, a 4-4-0, was converted into a switcher and later scrapped."

Joe Plunkett, veteran South Park runner now living in Grand Junction, Colorado, writes that, to the best of his recollection, no. 1 was later used to pump water at the roundhouse in Como but was taken up to Denver around 1884. No. 1 was scrapped in 1888. As far as the writer knows, no photograph of this engine exists.

Concerning number 2, Joe Plunkett writes that this engine, a 4-4-0 named the "Platte Canon" was later fixed up as a special to pull the pay car and also the Officials' car at times, but because she slipped the rail so bad, especially on three and four per cent grades, she was removed from this particular service. This was probably the reason this engine was rebuilt as a switcher as stated by Mr. Roesch. The South Park had acquired these first two engines in the days when finances were none too plentiful, but by 1878, the financial picture had improved and the company standardized on the "Mason Bogie." Old timers often referred to them as "sewing machines" due to their odd motion and valve arrangement. Due to its unique construction this locomotive was particularly suited for use on a mountain railroad such as the South Park where plenty of 20 and 30 degree curves were to be found. Conclusive evidence as to the adaptability of this little engine to mountain railroading is borne out when it is known that the South Park management, on the recommendation of Col. C. W. Fisher,³ purchased 23 of

³ F. P. Roesch, Standard Stoker Co.

Mason's engines between 1878 and 1880. However, due to the demand for larger and heavier power, all subsequent orders for locomotives called for the conventional 2-6-0 and 2-8-0 types. Regarding the latter type the South Park, in common with other Colorado mountain railroads, found the consolidation an ideal engine for mountain service. Concerning the Mason Bogie type of engine, we quote directly from a paper by Mr. Chas. E. Fisher—R. & L. H. S. BULLETIN no. 41:

"The Fairlie engine appealed to William Mason but he foresaw difficulties in its use on our American railroads with their sharp curves. Mr. Mason built his driving wheels and cylinders on a truck or "bogie" frame, consequently they were free to turn around the center pin and thus follow the curvature of the track. The center pin was held by a cast iron saddle attached to the boiler, others placed the center pin to the main frame of the engine. This plan of Mr. Mason's was satisfactory for the lighter engines but he afterward attached the center pin to a main frame extending from one end to the other, and nearly the whole length of the engine. On his first engines of this type, the tender was carried on a separate frame and was bolted to the sides of the fire-box, and this was continued, with some modification, to the last.

The steam pipe was carried through the front tube sheet in the regular way and then down to the bottom of the smoke box where it was attached to a horizontal pipe which led back to the hollow bed plate casting in the center of which was a vertical pipe connected with a ball and socket joint and stuffing box. Then a vertical pipe went forward and connected with the branch pipes leading to the cylinders. In this way flexibility of the steam pipes was obtained with only one movable joint. The exhaust pipe had to move with the truck and the petticoat pipe was made oblong at its lower end to take care of the transverse movement of the exhaust pipe.

The first engines were equipped with the plain Stephenson gear but on his later engines on account of the closeness of the first pair of drivers he used the Walschaert gear and was the first builder in this country to use this gear to any great extent. The reversing shaft, however, was placed on top of the boiler as clearance did not permit it to be placed underneath as in present practice.

The early engines did not have leading trucks and the majority were of the 0-4-4 type. Flange wear on the first pair of drivers and increasing size of these engines caused him to use a two wheel truck."

In a letter to the writer, Mr. Fisher states:

"After looking at a profile of the South Park line, I sometimes wonder that the road could operate at all in the winter. Those Mason locomotives must have taken a terrific beating on those grades with any kind of a train. Letters in the files of William Mason show that those bogies had their troubles, whether this was due to the bogie arrangement, the drivers turning like a truck, with the curvature of the road, or whether it was because the tender frame was attached to the sides of the fire-box—we will never know at this late day. The South Park road admitted they were the best "steamers" of all their engines."

Further concerning the Mason Bogie, Mr. Roesch writes:

"In my day on the South Park, all the enginemen preferred the Mason engine. They were good steamers and easy to maintain, particularly the valve gear. At that time none of the locomotives were equipped with driver brakes, but on the contrary, all used the "LeChatelier," or water brake—the customary practice being to operate the locomotive in reverse on descending grades, utilizing the back pressure built up in the cylinders to assist in controlling the speed. This was hard on the valve gear, especially the Stephenson type. The old Eames vacuum brakes eventually gave way to the Westinghouse air-brake."

Relative to this subject of brakes, we should not fail to mention the auxiliary air tanks that were hung on practically all South Park engines and their tenders. Back in the days of small motive power with their under-size air pumps, this was common practice on most all mountain railroads. Due to the frequency of encountering both ascending and descending grades in mountainous country, the usual air-pump equipment found on the average small engine of early-day vintage, was unable to supply enough air needed in the constant charging and recharging of the train line. Therefore, to assist the pump, these auxiliary tanks which were pumped up at odd times, carried a reserve supply of air which was required by an engineer to recharge his train line and thus maintain proper braking control over his train. Mr. H. L. Curtiss writes that many of the early Park engines also had independent hand brakes on the tender.

During the writer's search for locomotive material, an interesting incident concerning an old bogie type engine now standing on the grounds of the Iowa State College at Ames, Iowa, came to light. According to statements made in a college engineering publication of this school, this engine was built by Rogers Ketchum & Grosvenor of Paterson, New Jersey, in 1855 for The Mississippi & Missouri Railroad, and was the second railroad locomotive to enter the state of Iowa. This paper further states that later it was sold to the Denver & Rio Grande and still later to the Chicago, Burlington & Quincy, following which the engine was then retired and given to the College in 1904.

However, a close inspection of this old engine by Mr. Guyon C. Whitley, a member of our Society and who lives in Ames, Iowa, discloses some interesting facts. The drive wheel diameters, wheel base, firebox dimensions, gauge and valve gear coincides exactly with the specifications of Mason engines built for the South Park company. The badge plate giving the builder's name and construction number is missing, but on the front of the right cylinder casting are the letters "D. S. P." Cast in a front wheel truck are the words "Denver Wheel G. W. Co. Denver, Colo. Jan. 14, 1896. U. P. D. & G." On both of the two rear wheels under the tender are the letters "D. & S. P." In view of this and other evidence, Mr. Chas. E. Fisher, Mr. Whitley, and the writer contend that this is an original Denver South Park & Pacific Mason Bogie. How the engine ever got to this final resting place is unknown.

Excluding the earliest engines such as number 1 and 2, and the 23 Masons, South Park motive power, which weighed from around $27\frac{1}{2}$ to $42\frac{1}{2}$ tons, was rather heavy for a three-foot gauge road. Even with this heavier power it often required from two to four engines to get a ten to fifteen car freight drag up Boreas or Alpine Pass. The following chart copied from a 1912 Employees Timecard, gives the rating in tons which the various engines in use at that time, could move over miscellaneous sections of the road.

ENGINE RATING IN TONS OF 2,000 POUNDS

Engine Classification and Numbers

	B-3-A 11-13	B-3-B 21-22	B-3-C 4-10	B-4-E 71-73
	Tons	Tons	Tons	Tons
PLATTE CANON DISTRICT				
West Bound				
Denver to Platte Canon	340	400	425	475
Platte Canon to Pine Grove	115	150	175	190
Pine Grove to Grant	90	120	140	155
Grant to Kenosha	80	110	125	140
Jefferson to Como	160	210	250	290
East Bound				
Jefferson to Kenosha	85	110	130	140
LEADVILLE DISTRICT				
West Bound				
Como to Boreas	70	95	110	120
Dickey to Climax	75	105	120	135
East Bound				
Leadville to Climax	140	185	210	235
Dickey to Breckenridge	110	155	175	195
Breckenridge to Boreas	70	95	110	120
GUNNISON DISTRICT				
West Bound				
Como to Bath	100	130	150	170
Nathrop to Mt. Princeton	130	160	190	210
Mt. Princeton to Alpine Tunnel	70	95	110	120
Gunnison to Teachout	300	375	430	460
Teachout to Baldwin	130	160	185	200
East Bound				
Gunnison to Parlins	275	325	350	400
Parlins to Pitkin	125	160	190	215
Pitkin to Alpine Tunnel	70	95	110	120
Nathrop to Schwanders	325	400	450	500
Schwanders to Bath	90	120	130	140
Platte River to Como	170	200	240	260

With their small drivers, which averaged around 37 to 40 inches, the boilers lay very low and extended all the way back through the cab, separating the engineer and fireman. This eliminated the so-called deck as we know it on the modern locomotive. Due to this low boiler construction, the links, when the reverse lever was well down, would drop close to the ties. Roy Morton writes that during sub-zero weather the engine crews would often have to take a steam hose and thaw out the packed and frozen snow in the link blocks before they could reverse.

William Wendell, early South Park runner, wrote the author:

"The old giant balloon stacks which looked like hay-burners, were often called 'Boo-Hoos.' At night the shower of sparks that blew up in the air looked like a Fourth of July celebration. Farmers' hay-stacks along the right-of-way caught hell and were often set on fire. The boiler flues were always clean because of the pure mountain water and good Baldwin coal. This coal burned to a white ash, which would blow out the stack if the dampers were opened."

Both balloon and diamond stacks on the South Park began to make their exit around the turn of the century.

Because of the great number of fires started along the right-of-way by the engines, the company developed a new "gizmo" known as the cinder catcher. This contrivance resembled a big sausage hooked to the top of the stack and which hung down the side of the smoke box almost reaching the rails. It was so designed that the cinders, caught by a screen placed above the stack, were deflected and dropped to the ground through a curved pipe running down the side of the smoke box.

Engineer Whitney writes that the old class DJ engines, Brooks numbers 29 to 38, were known as "cold-water Brooks" or "ice cream freezers." That because of a shallow fire-box with grates that pitched from six inches below the fire-box door to below the flue sheet, they were very hard to fire and made poor steamers. He also added the remark that a common gag among engine crews was that if you wanted a cold drink, just open up the blow-off cock of a "cold-water Brooks." Engineer Wendell added that A. L. Humphrey, Sup't. of Motive Power, made a good engine out of number 35 by installing a new type fire-box of his own design. According to Wendell, Billy Westall used this engine, later number 162, on passenger service between Denver and Como and could handle a three-car train on Kenosha Hill with ease.

Engineer Wendell also tells us that around 1883, the following South Park rolling stock was loaned to the Utah & Northern R. R. This was a narrow gauge Union Pacific controlled road located in Utah and Montana.

Mason engines, numbers: 3, 4, 5, 6, 7, 10, 12, 13, 14, 15, 16, 20, 21, 22, Dawson & Bailey engines, numbers: 17 and 18, and 200 miscellaneous freight cars. Mr. Wendell added, that to the best of his recollection, all this rolling stock was later returned to Colorado. Confirmation of this is apparently to be found in the records of the Pacific Railway Commission Trials wherein an engineer's report dated September 1, 1887, states that three Mason engines, numbers 51, 52, and 55 (original numbers 15, 16, and 22) and two Brooks engines, numbers 156 and 161 (original numbers 29 and 34), were in service on the Utah & Northern on that date.

In addition to the South Park's own power, Thomas St. John states that at various times prior to 1921, three Denver, Boulder & Western engines, numbers 1, 25, and 33, were in use over on the Colorado & Southern. William Cairns and Jesse Frazier both write that the Colo. & Sou. was experimenting with number 25, a Shay engine, on Boreas Pass with a view of perhaps buying it. Evidently the Shay's performance did not justify its purchase as this engine was sold to a road in Utah.⁴ Also, around 1936, the Denver & Rio Grande Western leased three of their engines, numbers 343, 345, and 346 to the Colorado & Southern. Confirmation of the South Park's use of these various engines from foreign roads is found in old Colo. & Sou. train sheets owned by Richard H. Kindig.

⁴ Mr. P. H. Graham of Morse Brothers, Denver.

Relative to the three Rio Grande engines, Mr. Kindig writes that they were loaded on flat cars at Alamosa and shipped up to Denver. While in use on the South Park they were equipped with the usual Colo. & Sou. cinder catcher. In August 1936, number 346, while running light down the east slope of Kenosha, overturned and suffered considerable damage. The Colo. & Sou. loaded the damaged engine on a flat car and took it into the C. B. & Q. shops in Denver where it was repaired. The three engines were returned to the Rio Grande in the spring in 1937.

Relative to the first two narrow gauge engines owned by the Colorado Central, there seems to be a question concerning their correct wheel arrangement. Mr. C. C. Rogers of Golden, an old timer who used to work on the Clear Creek line, writes in the Locomotive Engineers Journal of November 1943. We quote in part:

"The following material was sent to me by the Union Pacific Old Timers Club and should interest the old timers who railroaded on the Colorado Central in the 70's.

The first engines to pull into Georgetown and Central City on passenger were called "Punch" and "Judy."⁵ They had two drivers on a side and no pony truck, and pulled two coaches which weighed six tons each . . ."

The H. K. Porter Company, successor to Dawson & Bailey and Porter-Bell, report that Colorado Central no. 1 was a saddle tank engine with three pair of drivers and a four-wheel tender and that Colorado Central no. 2 had three pair of drivers and a four-wheel tender. On the other hand a Colorado Central locomotive roster issued by the Union Pacific in 1885, states that no. 1 was a 2-6-0 and that no. 2 was an 0-4-0. Apparently, it is either a case of erroneous information being handed down, or else the two engines in question, especially no. 2, were completely rebuilt.

One or two photographs of these two early engines have come to light, but due to the angle that they were photographed or the age of the print, it has been impossible to determine accurately their correct wheel arrangement. The writer has listed these engines in the roster as described by the 1885 Union Pacific records, with suitable remarks.

⁵ Evidently, these names were invented by the Clear Creek citizens. As near as can be ascertained, the Union Pacific did not name any of their engines.

DENVER, SOUTH PARK & PACIFIC R. R. LOCOMOTIVE ROSTER

COLORADO CENTRAL R. R. LOCOMOTIVES

**Locomotive
Numbers**

1	284	Dawson & Bailey	#151	4-1874	2-6-0 Odd	12x16"	33"	39160	Sc	1889
2	293	Porter Bell	214	3-1875	0-4-0 Odd	12x16"	33"	32450	Sc	1889
3	33	Porter Bell	217	6-1875	0-6-0 AH-1	12x16"	33"	32450	Unknown	
4	30	Porter Bell	149	3-1873	0-6-0 AH-1	12x16"	33"	32450	Sc	1889
5	31	Porter Bell	150	4-1873	0-6-0 AH-1	12x16"	33"	32450	Unknown	
6	32	Porter Bell	—	—	0-6-0 AH-1	13x16"	34"	32450	Sc	1889
7	292	Porter Bell	—	—	2-6-0 Odd	12x16"	36"	33180	Sc	1887
8	150	Brooks	403	3-1880	2-6-0 DJ-1	15x18"	36"	46960	C&S	#15
9	151	Brooks	404	3-1880	2-6-0 DJ-1	15x18"	36"	46960	See Note	
10	152	Brooks	464	10-1880	2-6-0 DJ-1	15x18"	36"	46960	C&S	#16
11	153	Brook	465	10-1880	2-6-0 DJ-1	15x18"	36"	46960	C&S	#2
12	154	Brooks	547	6-1881	2-6-0 DJ-1	15x18"	36"	46960	C&S	#3
13	155	Brooks	548	6-1881	2-6-0 DJ-1	15x18"	36"	46960	C&S	#14
14	107	Cooke	1558	2-1884	2-6-0 DI-2	14½x18"	40"	58300	C&S	#12
15	108	Cooke	1559	2-1884	2-6-0 DI-2	14½x18"	40"	58300	C&S	#13

NOTES

- No. 1. The H. K. Porter Co., successors to Dawson & Bailey and Porter Bell, report this engine was a saddle tank with three pairs of drivers and a four wheeled tender. Old U. P. records list this engine with 12x18" cylinders, 37" drivers. For further details, see the text.
- No. 2. The H. K. Porter Co. reports this engine had three pairs of drivers and a four wheeled tender. Old U. P. records list the engine with 36" drivers. See further details in the text.
- No. 3. Old U. P. Records list this engine with 13x16" cyl. 34" drivers. Disappears from the records during 1887-8.
- No. 4. A photo owned by S. R. Wood shows this engine as a saddle tank. It was rebuilt 2-1884. Old U. P. records list it with 13x16" cyl. 34" drivers.
- No. 5. Engine rebuilt 9-1881. Old U. P. records list it the same as No. 4. Disappears from the records during 1887-8.
- No. 6. Rebuilt 9-1882.
- No. 9. The Pacific Ry. Commission Report states this engine was rebuilt 12-1885 and, from the evidence, it was assigned road #59. It was sold to the A. Kent Lumber & Building Co. in 1899.
- Nos. 8-13. The U. P. records show these engines with 38" drivers, caused probably by the use of thicker tires.
- Nos. 14-15. Old photographs show these engines bearing UPD&G Nos. 107 and 108 and Nos. 7 and 8 respectively. Details not known.

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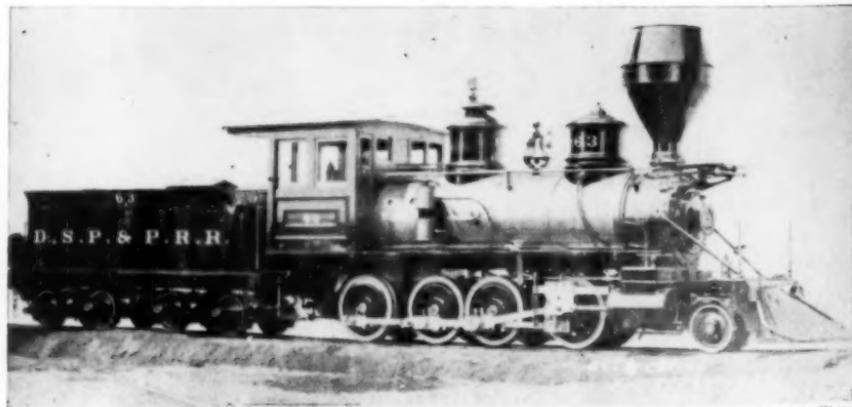
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Courtesy of C. E. Fisher

D. S. P. & P. No. 15, "Breckenridge," Mason, 1879.



Courtesy of C. E. Fisher

D. S. P. & P. No. 63, Cooke, 1883.

DENVER. SOUTH PARK & PACIFIC LOCOMOTIVES

39	109	Cooke	2-1884	1550	2-6-0	DI-2	14½x18"	40"	58300
40	110	Cooke	2-1884	1551	2-6-0	DI-2	14½x18"	40"	58300
41	198	Cooke	6-1883	1478	2-8-0	EJ-1	15x18"	36"	62900
42	199	Cooke	6-1883	1479	2-8-0	EJ-1	15x18"	36"	62900
43	200	Cooke	6-1883	1480	2-8-0	EJ-1	15x18"	36"	62900
44	201	Cooke	6-1883	1481	2-8-0	EJ-1	15x18"	36"	62900
45	202	Cooke	6-1883	1482	2-8-0	EJ-1	15x18"	36"	62900
46	203	Cooke	6-1883	1483	2-8-0	EJ-1	15x18"	36"	62900
47	204	Cooke	7-1883	1484	2-8-0	EJ-1	15x18"	36"	62900
48	205	Cooke	7-1883	1485	2-8-0	EJ-1	15x18"	36"	62900
49	206	Cooke	7-1883	1486	2-8-0	EJ-1	15x18"	36"	62900
50	190	Baldwin	1-1880	4917	2-8-0	EJ-1	15x18"	37"	56000
51	191	Baldwin	1-1880	4919	2-8-0	EJ-1	15x18"	37"	56000
52	192	Baldwin	1-1880	4926	2-8-0	EJ-1	15x18"	37"	56000
53	193	Baldwin	1-1880	4930	2-8-0	EJ-1	15x18"	37"	56000
54	194	Baldwin	2-1880	4950	2-8-0	EJ-1	15x18"	37"	56000
55	195	Baldwin	2-1880	4951	2-8-0	EJ-1	15x18"	37"	56000
56	196	Baldwin	2-1880	4955	2-8-0	EJ-1	15x18"	37"	56000
57	197	Baldwin	2-1880	4957	2-8-0	EJ-1	15x18"	37"	56000
58	207	Cooke	7-1883	1487	2-8-0	EJ-1	15x18"	36"	62900
59	208	Cooke	8-1883	1494	2-8-0	EJ-1	15x18"	36"	62900
60	209	Cooke	8-1883	1495	2-8-0	EJ-1	15x18"	36"	62900
61	210	Cooke	8-1883	1496	2-8-0	EJ-1	15x18"	36"	62900
62	211	Cooke	8-1883	1497	2-8-0	EJ-1	15x18"	36"	62900
63	212	Cooke	8-1883	1498	2-8-0	EJ-1	15x18"	36"	62900
64	213	Cooke	8-1883	1499	2-8-0	EJ-1	15x18"	36"	62900
65	214	Cooke	9-1883	1500	2-8-0	EJ-1	15x18"	36"	62900
66	215	Cooke	9-1883	1501	2-8-0	EJ-1	15x18"	36"	62900
67	216	Cooke	9-1883	1502	2-8-0	EJ-1	15x18"	36"	62900
68	217	Cooke	9-1883	1503	2-8-0	EJ-1	15x18"	36"	62900
69	111	Cooke	2-1884	1552	2-6-0	DI-2	14½x18"	40"	58300
70	112	Cooke	2-1884	1553	2-6-0	DI-2	14½x18"	40"	58300
71	113	Cooke	2-1884	1554	2-6-0	DI-2	14½x18"	40"	58300
72	114	Cooke	2-1884	1555	2-6-0	DI-2	14½x18"	40"	58300
73	115	Cooke	2-1884	1556	2-6-0	DI-2	14½x18"	40"	58300
74	116	Cooke	2-1884	1557	2-6-0	DI-2	14½x18"	40"	58300

NOTES

When the D. S. P. & P. came under Union Pacific control, the locomotives were renumbered and classified into the U. P. classification. These locomotive numbers form the second column. In the main, these numbers were carried by these locomotives under the different ownerships—D. L. & G., Aug. 29, 1889 and U. P. D. & G. Apr. 1, 1890. The weight given is the weight on drivers.

The following relates to the disposition of these locomotives:

No.

1. Scrapped 1888.
2. An old South Park engineer informed Mr. J. C. Thode this engine was purchased second hand from the Kansas Central R. R. The Report of the Pacific Ry. Commission states this locomotive was new previous to 1882. Disposition unknown.
3. Scrapped 1890.
4. Scrapped 1889.
5. The Mason records show this engine was built for the Kansas Central R. R. (2' 10" gauge), their "W. Smith." It was returned to the builder and sold to the DSP&P.
- 6 & 7. Scrapped 1890.
8. Scrapped 1889.

9. Scrapped in 1886 and the U. P. replaced the engine with Utah & Northern #101. Disposition of latter unknown.
- 10-13. Scrapped 1890.
14. Disposition unknown.
15. The Pacific Ry. Commission Report states this engine was rebuilt in 1884 and, in 1887 was in service on the Utah & Northern.
16. The same as #15. Disposition of both unknown.
- 17-19. Scrapped 1889. No. 19 rebuilt 5-1884.
- 20-21. Disposition unknown.
22. The same as #15.
23. Disposition unknown.
24. C & S records this engine rebuilt prior to 1902 from DL&G #57, as a 2-6-0.
- 25-27. Disposition unknown.
28. Wm. Wendell stated this engine was scrapped and sold to the Goodstene Rolling Mill in Denver who used the boiler as a stationary unit.
29. The same as #15. Scrapped 8-1923.
- 30-31. Disposition unknown.
32. Reported as rebuilt by the U. P. in 1885 with 14x18" cyl. It was evidently renumbered 60 and is found in the Pacific Ry. Commission Report. Disposition unknown.
33. Disposition unknown.
34. The same as #15.
35. Reboilered 12-1894, scrapped 3-1927.
36. Sold by C & S in 1902.
37. Sold to Montrose Lumber Co. about 1902.
38. The same as #36.
- 39-40. Reboilered 6-1900 and 8-1901, rebuilt with 15x18" cyl., scrapped 5-1934 and 12-1938.
41. Scrapped 12-1921.
42. Scrapped 8-1916.
43. Scrapped 6-1917.
44. Traded to Morse—See Note I.
45. Scrapped 10-1914.
- 46-47. Traded to Morse—See Note I.
48. Scrapped 10-1914.
- 49-50. Traded to Morse—See Note I.
51. Sold prior to 1902 to Ed. Hines Lumber Co.—A. A. Bigelow & Co. and Thunder Lake Lumber Co.
52. Sold prior to 1902 to the J. J. White Co., then to Deerfield R. R., their #1.
53. Sold prior to 1902 to the Oakgrove & Georgetown R. R. in Alabama and Mississippi.
54. Sold by C & S.
55. Sold prior to 1902 to the B. G. Peters Salt & Lumber Co., then to Manistee & Luther R. R. in Michigan.
56. Sold prior to 1902 to the Clarkson Saw Mill Co. Another report has it this engine became Deerfield R. R. #2.
57. Sold prior to 1902 to the Manistee & Luther R. R.
58. Scrapped 7-1916.
59. Scrapped 2-1921.
60. Sold to Halleck & Howard Lumber Co., 8-1920.
61. Traded to Morse—See Note I.
62. Scrapped 2-1921.
63. Scrapped 10-1920.
64. Scrapped 6-1918.
65. Scrapped 6-1918.
66. Sold to Halleck & Howard Lumber Co., 6-1920.
67. Sold to Bellevue & Cascade R. R., tender of C&S 45 substituted.
68. Scrapped 10-1914.
69. Reboilered 7-1900, 15x18" cyl. scrapped 12-1938.
70. Reboilered 7-1902, 15x18" cyl. scrapped 9-1929.

71. Reboilered 6-1901, 15x18" cyl. scrapped 12-1938.
 73. Reboilered 8-1900, 15x18" cyl. scrapped 5-1934.
 74. Reboilered not recorded, scrapped 6-1918.
 72. Reboilered 8-1901, 15x18" cyl. Displayed at New York Fair in 1939, now stored in Aurora, Ill. Shops of the Chicago, Burlington & Quincy R. R.

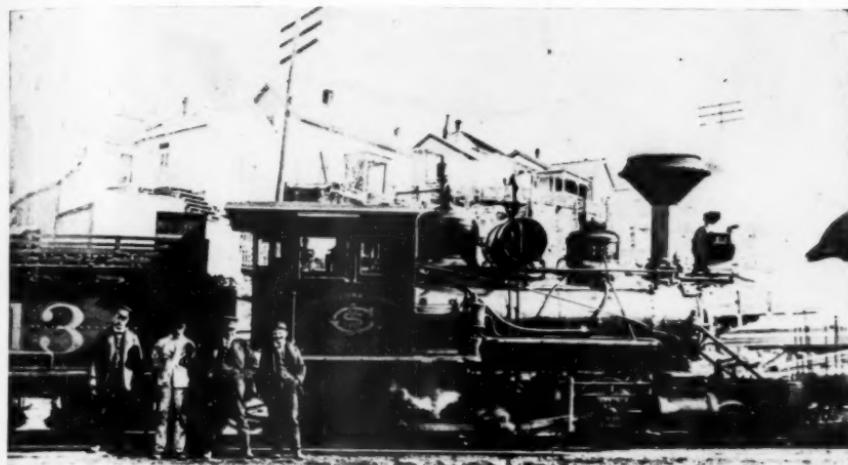
Note 1. Five engines, Nos. 44, 46-47 and 49-50 were traded to the Morse Bros. Machine & Supply Co. of Denver, 2-1921 in exchange for three second hand Denver, Boulder & Western R. R. locomotives, Nos. 30-32.

COLORADO & SOUTHERN R. R. LOCOMOTIVES

1	Mason	1880	618	2-6-0	13x16"	37"	45000	Ex	#57
2	Brooks	1880	465	2-6-0	15x18"	36"	46960	Ex	Colo. Cent. 153
3	Brooks	1881	547	2-6-0	15x18"	36"	46960	Ex	Colo. Cent. 154
4-10	Cooke	1884	1550-6	2-6-0	15x18"	40"	58300	Ex	Nos. 109-115
11	Cooke	1884	1557	2-6-0	15x18"	40"	58300	Ex	#116
12-13	Cooke	1884	1558-9	2-6-0	14½x18"	40"	58300	Ex	Colo. Cent. 107-8
14	Brooks	1881	548	2-6-0	15x18"	36"	46960	Ex	Colo. Cent. 155
15	Brooks	1880	403	2-6-0	15x18"	36"	46960	Ex	Colo. Cent. 150
16	Brooks	1880	464	2-6-0	15x18"	36"	46960	Ex	Colo. Cent. 152
17	Brooks	1882	743	2-6-0	15x18"	36"	46960	Ex	#161
18	Brooks	1882	756	2-6-0	15x18"	36"	46960	Ex	#163
19-20	Brooks	1882	782-3	2-6-0	15x18"	36"	46960	Ex	#164-5
21	Brooks	1882	713	2-6-0	15x18"	36"	56960	Ex	#156
22	Brooks	1882	755	2-6-0	15x18"	36"	56960	Ex	#162
23-29	Not assigned.								
30	Baldwin	1880	4917	2-8-0	15x18"	37"	56000	Ex	#190
31	Baldwin	1880	4919	2-8-0	15x18"	37"	56000	Ex	#191
32	Baldwin	1880	4926	2-8-0	15x18"	37"	56000	Ex	#192
33	Baldwin	1880	4950	2-8-0	15x18"	37"	56000	Ex	#194
34	Baldwin	1880	4951	2-8-0	15x18"	37"	56000	Ex	#195
35	Baldwin	1880	4955	2-8-0	15x18"	37"	56000	Ex	#196
36	Baldwin	1880	4957	2-8-0	15x18"	37"	56000	Ex	#197
37-46	Cooke	1883	1478-87	2-8-0	15x18"	36"	62900	Ex	#198-207
47-56	Cooke	1883	1494-03	2-8-0	15x18"	36"	62900	Ex	#208-217
57-62	Rhode Is.	1886	1592-7	2-8-0	16x18"	37"	61900	Ex	#260-5
63-64	Baldwin	1890	11331-2	2-8-0	16x20"	37"	66000	Ex	#266-7
65	Baldwin	1890	11340	2-8-0	16x20"	37"	66000	Ex	#268
66	Baldwin	1890	11353	2-8-0	16x20"	37"	66000	Ex	#269
67	Baldwin	1890	11333	2-8-0	16x20"	37"	66000	Ex	#270
68	Baldwin	1890	11352	2-8-0	16x20"	37"	66000	Ex	#271
69	Baldwin	1890	11355	2-8-0	16x20"	37"	66000	Ex	#272
70	Baldwin	1890	11356	2-8-0	16x20"	37"	66000	Ex	#273
71	Baldwin	1897	15142	2-8-0	15½x20"	37"	70500	Ex	UPD&G #9
72	Baldwin	1897	15143	2-8-0	15½x20"	37"	70500	Ex	UPD&G #10
73	Baldwin	1897	15144	2-8-0	15½x20"	37"	70500	Ex	UPD&G #11
74	Brooks	1898	2951	2-8-0	16x20"	37"	85000	Ex	DB&W #30
75	Brooks	1898	2969	2-8-0	16x20"	37"	85000	Ex	DB&W #31
76	Brooks	1898	2970	2-8-0	16x20"	37"	85000	Ex	DB&W #32

Note: Six engines, Nos. 57-62 were ordered by the Union Pacific for service on the Utah & Northern and they were subsequently sold to the D. L. & G. Evidence points they retained their original U&N numbers after the transfer. Nos. 266-273 were ordered by the U. P., lettered DL&G on the sand dome and U. P. on the cab.

No. 57 scrapped 3-1923; 58 12-1938; 59 4-1925; 61 1-1930; 62 12-1927; 63 2-1929; 65 12-1938; 66 9-1923; 67 2-1927; 68 12-1938; 69-70 12-1942 and 72-73 10-1940. No. 64 was sold to the Sosa & Gracia Co. in Mexico City in 1921; No. 60 is on permanent exhibition at Idaho Springs, Colo. and No. 71 has the same honor at Central City, Colo. Nos. 74-76 were sold to Morse Bros. Machine & Supply Co. Denver, March, 1945.

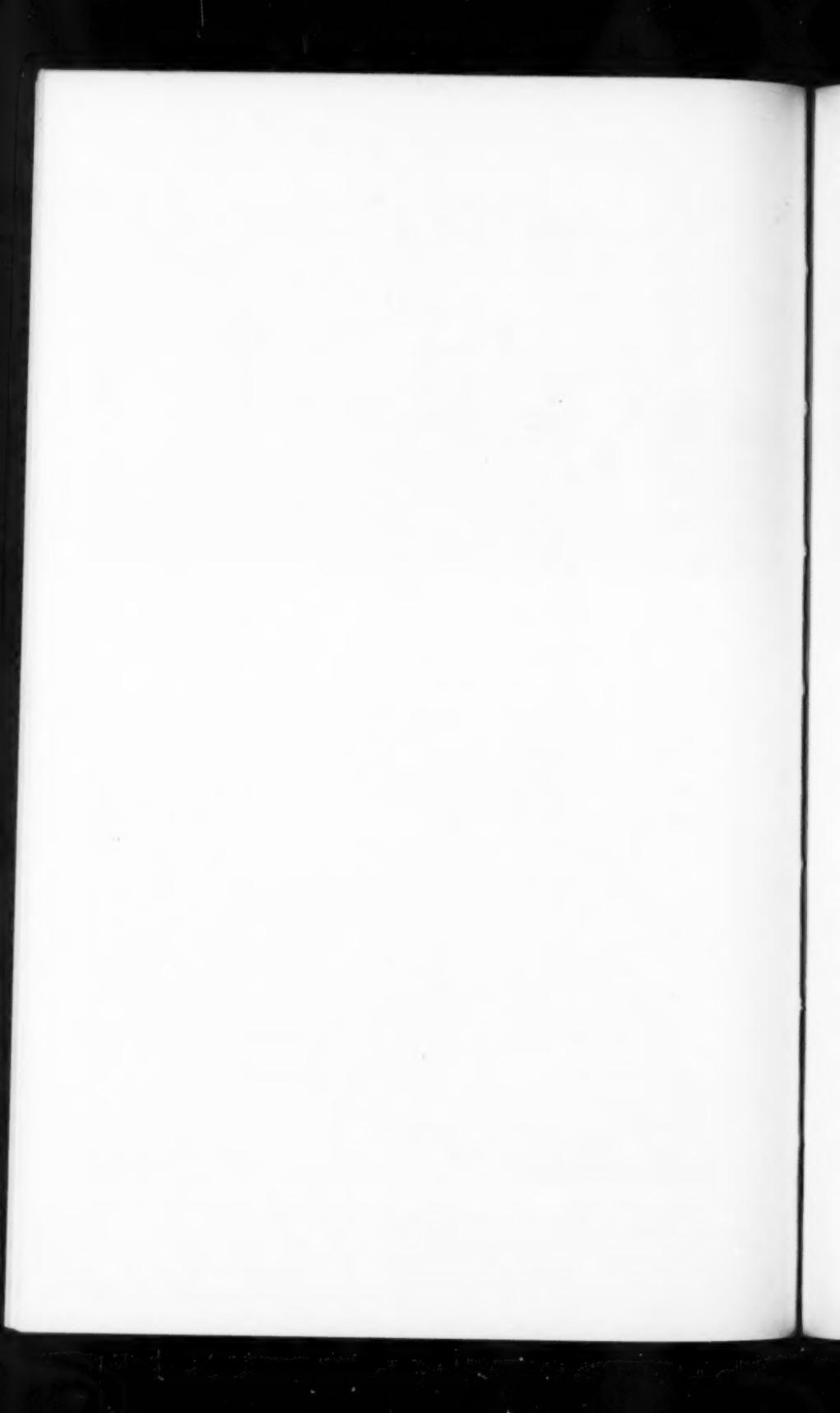


Courtesy of R. H. Kindig

Colorado & Southern No. 13, Cooke, 1884, at Golden, Colo.



Colorado & Southern Locomotive No. 76. Built by Brooks (2970) June 1898. Ex: Denver Boulder & Western No. 32. Photographed at Climax, Colorado, June 1937.



To the many members that have made inquiry relative to "Mac" Poor's History of the South Park R. R., this chapter covering the motive power is all that the Society will publish, at least for the present.

The original assignment to the author was to be included in two bulletins. The finished manuscript would fill nearly half a dozen. To publish it in such form, whereby our membership would receive nothing but South Park material for almost two years would be obviously unfair to our membership whose interests in this road are only lukewarm or even of a negative quantity. Since the author has insisted that none of his work be deleted, it has been impossible to publish this history as originally planned. The chapter relating to the motive power was the property of this Society and is published herewith and, your Editor can only express the hope that perhaps some time in the future a history of the South Park R. R. can be prepared which we can publish.

However, our good friends, the Rocky Mountain R. R. Club of Denver, Colo., hope to publish Mr. Poor's history in its entirety and any of our members who wish to either help the cause along or place their order for a copy, may do so by addressing Mr. S. L. Logue, 3227 Bryant St., Denver (11), Colo.

Locomotives of the Adirondack Railway Company

1864-1902

By DAVID S. WEATHERWAX

The original locomotives of the Adirondack Railway Company were the No. 1, the "Major General Hancock," No. 2, the "Luzerne" and the No. 3, "George Leavitt," purchased and placed in service in the order named. They were followed by the No. 4, "Utownana" (June 1884) and the No. 5, "T. C. Durant" (December 1884).

In the following year, 1885, it would appear from the records available, that a renumbering took place. The No. 3, "George Leavitt" was renumbered 6 and renamed "C. E. Durkee." About this time the No. 1, the "Major General Hancock" was renumbered 3, retaining its original name. This left No. 1 vacant.

Thus, on June 11, 1889, when control of the Adirondack Railway passed to the Delaware & Hudson Company, it appears the locomotive roster was as follows:

- | | |
|-------|---|
| No. 1 | Vacant |
| No. 2 | "Luzerne" (Danforth & Cooke 1868) |
| No. 3 | "Major General Hancock" (Danforth & Cooke about 1864) |
| No. 4 | "Utownanna" (Schenectady 1884) |
| No. 5 | "T. C. Durant" (Schenectady 1884) |
| No. 6 | "C. E. Durkee" (Schenectady 1870) |

After control passed to the Delaware & Hudson Company, the following locomotives bearing the name Adirondack Railway were received:

Second No. 1, without name, (Dickson, March, 1890) (to supply the vacancy existing in that number)

No. 7, without name, (Dickson, April, 1890)

Next came the last locomotives to bear the company's name. They were a second No. 2, without name, to replace the original No. 2 "Luzerne" which had been retired, and No. 128, without name, both Dickson built in March and February, 1893, respectively. It is probable that these locomotives never went into service on the Adirondack Ry., at least there is no record of it. Although the Adirondack Ry. continued to be operated by its own organization until Nov. 5, 1902, after its control by the D & H Co., there continued to be considerable "swapping" of motive power between the two companies. It is believed that these two locomotives were taken over and used by the D & H and renumbered in their series. However, this is not supported by documentary evidence.

There was no attempt to classify the Adirondack motive power between passenger and freight service. The locomotives were used in either service as occasion required. This is particularly true of the early equipment. From the records, it would appear that the No. 1, the



The "Major General Hancock" at Hadley, N. Y., 1870 (?).



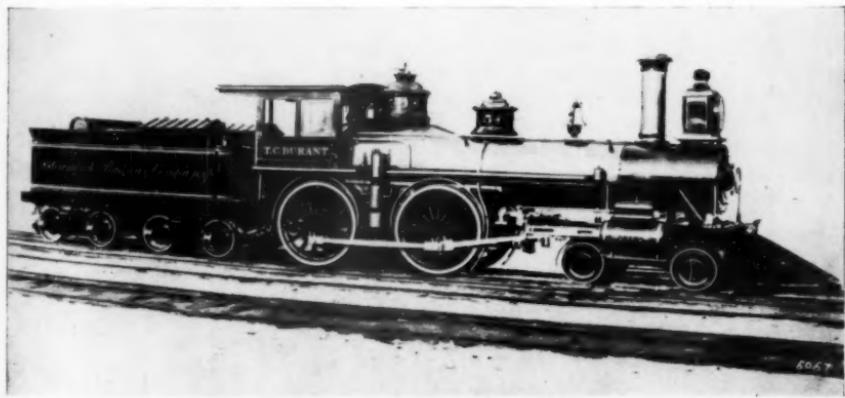
The General Office building, Saratoga Springs, N. Y., about 1875. The "George Leavitt" in the foreground.



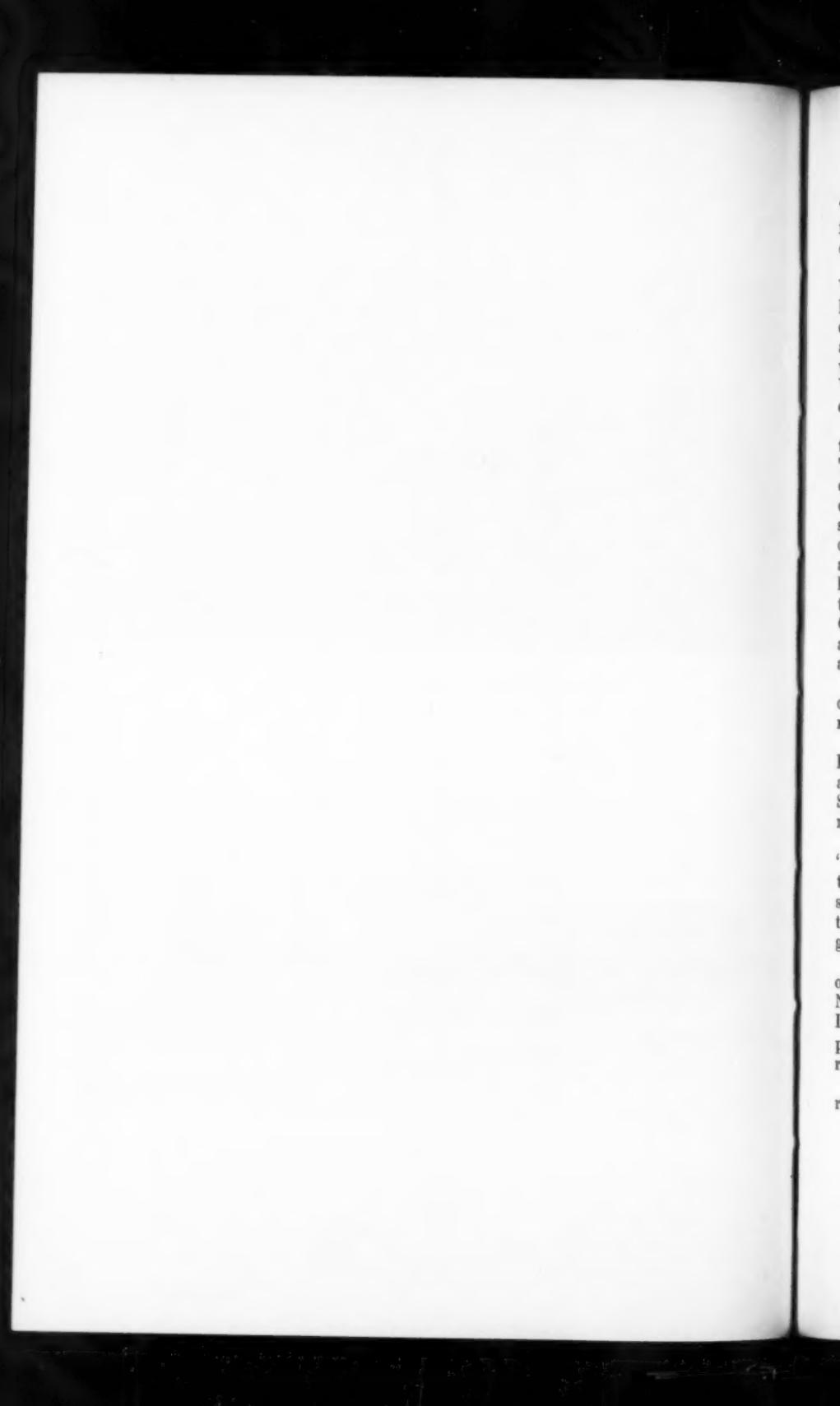


Courtesy of C. N. Fisher

Adirondack Ry. "George Leavitt," Schenectady, 1870.



Adirondack Ry. "T. C. Durant," Schenectady, 1884.



"Major General Hancock" and the No. 5, the "T. C. Durant" were favored for passenger service and spent more time in that service than did any of the others.

The No. 1 was believed to have been named after Major General Winfield Scott Hancock who commanded the Second Corps, Army of the Potomac, during the Civil War. One story is that this engine was originally built for the Union Pacific Railroad Co. during the Civil War and was in the vicinity of Dunkirk, N. Y., enroute to the west, when it was diverted to the Adirondack Ry. on orders of Dr. T. C. Durant, then Vice President of the Union Pacific and also interested in the Adirondack Co.

Another story is set forth in a newspaper clipping found amongst the papers of the late George N. Weatherwax, former Adirondack Ry. Train Dispatcher, after his death in 1908, the origin and date of the clipping is unknown to the writer. This clipping states that it is a relic of "Sherman's March Through Georgia." It was originally built for service on a Georgia Railroad in the ante-bellum days and was captured during Sherman's raid at Dalton. It was sent to Chattanooga, there sold as confiscated property and purchased by Dr. T. C. Durant and used by him in hauling supplies in Tennessee as a Government contractor. After the war, he brought it north, and when as President of the Adirondack Co., he used it to equip his railroad and its whistle was the first to awaken the echoes of the Upper Hudson at North Creek. It was used as a passenger engine for about twenty years and has been rebuilt twice.

The "Luzerne" possibly took its name from Lake Luzerne, located on the Adirondack Ry. near Hadley, N. Y. and a summer resort of some note.

Mr. George Leavitt was the Superintendent of the Blue Mountain Lake, Stage & Transportation Co., Director of the Adirondack Co., and a personal friend of Dr. T. C. Durant. The engine was rebuilt by Schenectady in 1885 and most of her brass work and ornamentation was removed during the rebuilding.

The Durant family owned an ocean going steam yacht named "Utowana" and there may be some connection between that name and the one on the locomotive. The engine and tender were painted black, striped with gold and color. Road name in script on the side of the tender in gold, shaded with red. Name of locomotive on cab panel in gold, also shaded in red.

The No. 5, named in honor of Dr. Thomas Clark Durant, President of the Adirondack Ry., and, on Oct. 8th, 1885, this locomotive and coach No. 5, appropriately draped in mourning, carried the remains of Dr. Durant from North Creek, N. Y. to Saratoga Springs, N. Y., at which point Coach No. 5 was turned over to the Delaware & Hudson Co., enroute to New York.

These are the locomotives that were owned by this company and a roster would appear as follows:

1 Major General						
Hancock	Danforth & Cooke	1864	(about)	Renumbered	3	
1 Not Named	Dickson	#755	1890	2-6-0	18x24"	56 $\frac{3}{4}$ " 10400
2 Luzerne	Danforth & Cooke	1868	4-4-0	16x24"	60"	Unknown
2 Not Named	Dickson	#896	1893	2-6-0	18x24"	62" 123000
3 George Leavitt	Schenectady	#636	1870	4-4-0	16x24"	60" Unknown
3 First No. 1				4-4-0	14x22"	60" Unknown
4 Utowana	Schenectady	#1922	1884	4-4-0	17x24"	64" Unknown
5 T. C. Durant	Schenectady	#1949	1884	4-4-0	15x24"	63" 70000
6 C. E. Durkee	Schenectady	#636	1870	4-4-0	16x24"	60" Unknown
7 Not Named	Dickson	#756	1890	2-6-0	18x24"	56 $\frac{3}{4}$ " 104000
128 Not Named	Dickson	#895	1893	2-6-0	18x24"	62" 123000

The author wishes to acknowledge the assistance of Mr. George Myers, former Locomotive Engineer of the Adirondack Ry. and the D & H Co., now retired and son of the late Jacob J. Myers, Locomotive Engineer and Master Mechanic of the Adirondack Ry.; Mr. William H. Cook, former Clerk and Locomotive Fireman of the Adirondack Ry.; the records of the late W. J. Coughtry, Recorder of the D & H Co. and member of this Society; Mr. John T. McGinity, Office of S. M. P., D & H Co.; Mr. J. H. Reddy, Auditor of Miscellaneous Accounts, D & H Co.; Mr. George Wilson, Road and Equipment Clerk, D & H Co., Mr. Joseph B. Ennis, Vice President (retired), American Locomotive Co., Mr. H. L. Russell, Tax Accountant, American Locomotive Co., and the papers and records of the late George N. Weatherwax, Train Dispatcher, The Adirondack Railway Company.





Howard Stillman as a young man.

Howard Stillman, Western Railroader

By R. ORMSBY MORRISON PHILLIPS

Howard Stillman was one of the lesser known great Western rail-road men. But his work and accomplishments make him of special note.

He started his career on the old Central Pacific Railroad, and finished it on the Southern Pacific Railroad. He had an outstanding record throughout.

In character he was a remarkable man, who had the respect of all. Mr. Ralph Knight, who worked as Chief Draftsman on the SP at one time said of him: "He was a kindly, well loved man, and all who worked under him liked him very much. He was bright, capable, and was not appreciated as he should have been."

Some of his noteworthy accomplishments are: designed the SP cab in front locomotives, designed a water heating plant which cut boiler maintenance 50%, made most of the first tests made on the CP for using oil as a locomotive fuel, and assisted in designing many famous CP and SP engines.

Mr. Stillman first went to work for the Central Pacific Railroad in the years when they were making many improvements and changes leading to the time it became the Southern Pacific. In 1887 he was working in the drafting room, under George A. Stoddard, chief draftsman, and A. J. Stevens and was General Master Mechanic. While in the drafting room he designed the #229, with the assistance of Mr. Stevens. This engine was sold to the Seventh St. Locoal, and was a fine money maker. Many famous engines were partly designed by Mr. Stillman, including that famous road engine which was too heavy to use, the "El Gobernador." He was largely responsible for the design of many parts, and worked with Stevens on his famous "Monkey Motion" locomotives.

His most important designing accomplishment was the Cab in the front engine, a double-articulated giant on the SP. He designed it to help overcome the trouble caused the engineer of the conventional type by the smoke in the snow sheds of the Sierras.

He was largely responsible for the success of the oil-burning tests made on the CP and SP. In 1892 he was holding tests on the SP ferry "Piedmont," and was instrumental in their success.

After that he was made Master Mechanic of the Shasta Division, and from there was made Engineer of tests for the SP. While on this job he perfected and in fact originated a Purifying Plant for purifying liquid Hydro-Carbon. When purified it was pure gasoline.

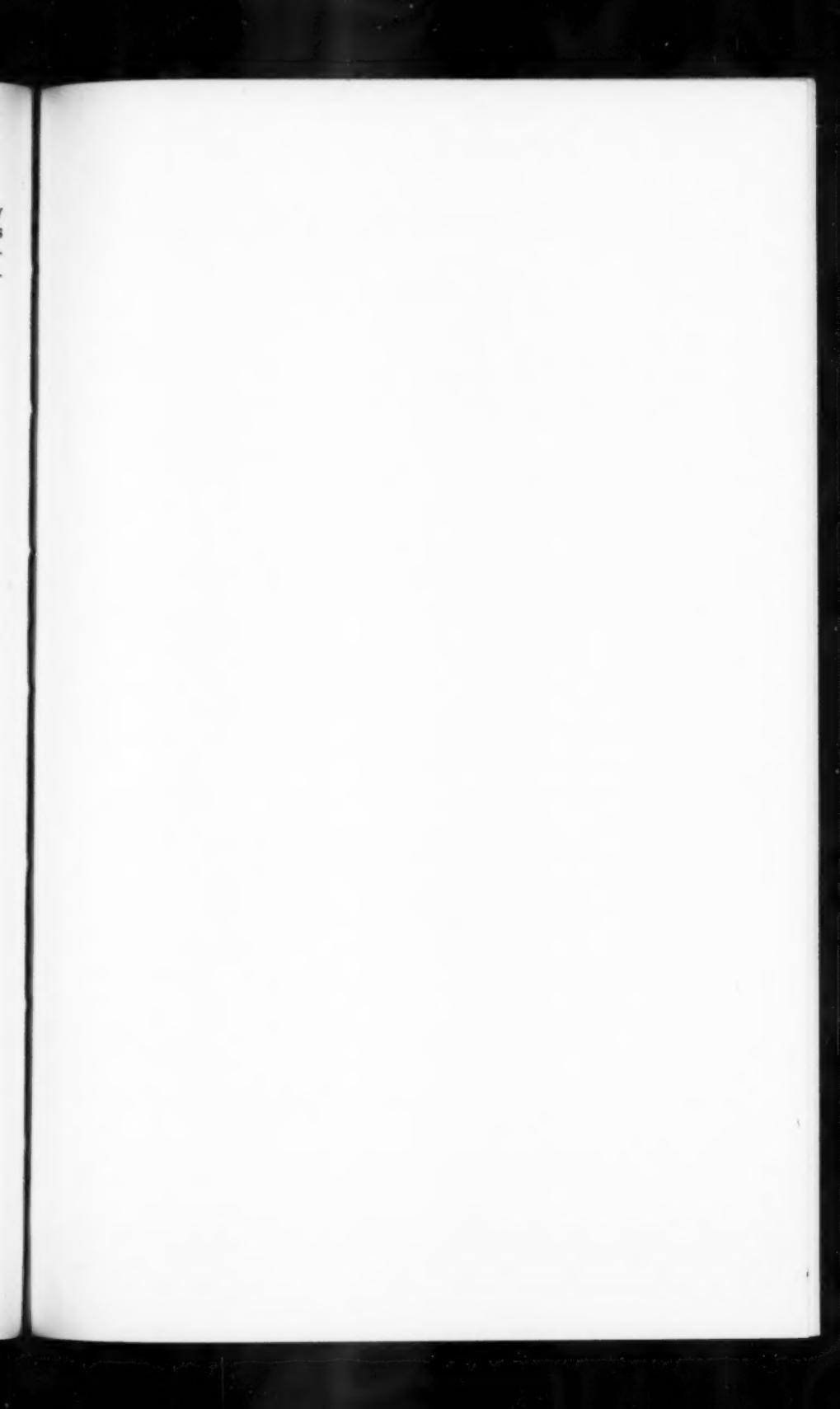
In 1906 Mr. Stillman became Master Mechanic of the Southern Pacific Co., with his headquarters in San Francisco. As well as that huge job, he was still the Engineer of Tests. He was Master Mechanic of the SP until his railroading days were ended.

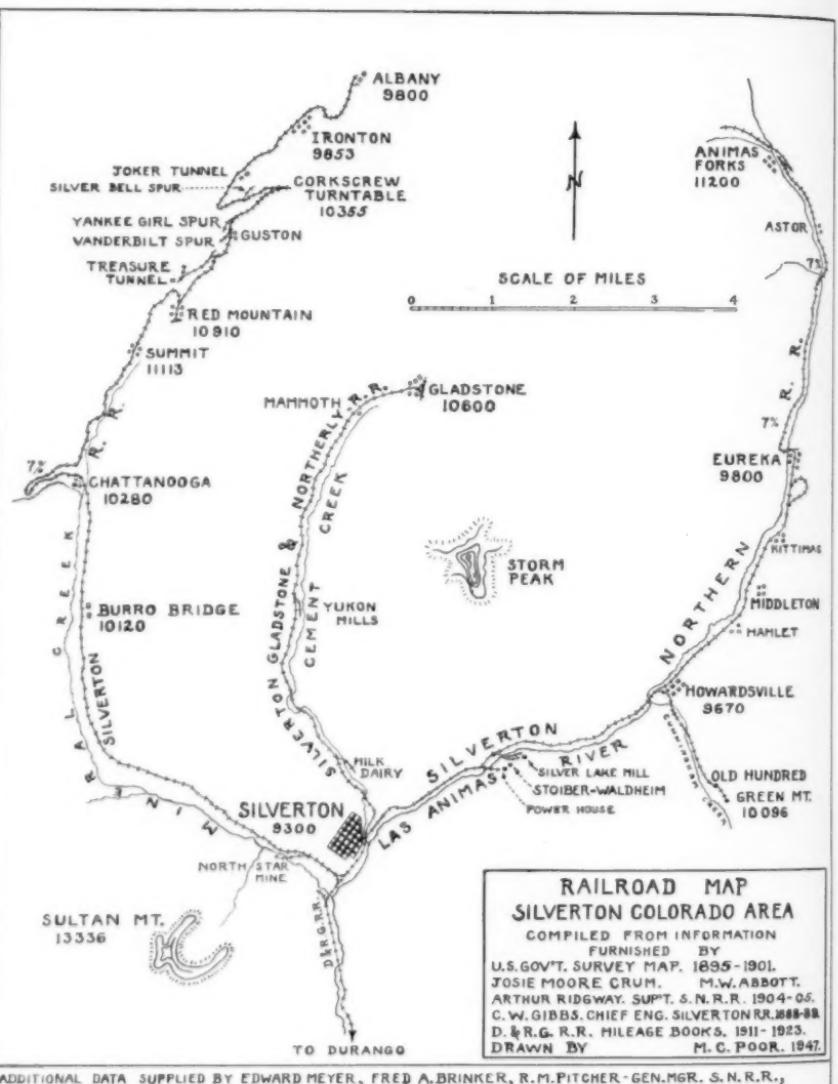
Mr. Stillman in his days with the two companies which later became one, was a fast friend of both Mr. A. J. Stevens and Mr. George A.

Stoddard. He worked with Mr. Stevens on many locomotives, and they were an excellent team. In this age of very modern ways of business and running railroads, the story of the early day roads is a very interesting one. The early day Western roads owe much to men like A. J. Stevens, Howard Stillman and George A. Stoddard.

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Rails Among Peaks

THREE LITTLE LINES

By JOSIE MOORE CRUM

SILVERTON RAILROAD

The Silverton Railroad! The most intriguing piece of narrow gauge in the United States! The railroad of the steepest grades, the sharpest curves, the loopiest loops, the highest altitude and the oddest switchbacks one of which had a wye with a depot inside and on the other a housed-over turntable! And the railroad of the famous Otto Mears passes!

Otto Mears and Fred Walsen, in 1882 and '83, after the opening up of the Yankee Girl Mine seemed to make it a good project, built a toll road, which they called the "Rainbow Route," from Ouray to Red Mountain and Silverton. This was one of the most famous pieces of road engineering of the day. The line went along the precipitous mountains of the Uncompahgre River and Red Mountain Creek canons and in places was cut out of sheer rock walls. It was very narrow and crooked—not the wide, graded road of the present—, so narrow in many places we often had to unhitch our team and block the buggy up on a side hill with boulders or prop it against a tree over the cliff edge while another conveyance got by. It was the road of the famous Bear Creek toll bridge where we stopped and parted with our cash, all of \$5 for a buggy team. Some of the turns were so sharp that as late as 1921 it was all our little Overland car could do to get around them and the grades were so steep, often 19%, that most of the early cars could not climb them.

While Mears and Walsen were constructing their road from Ouray to Red Mountain in the summer of 1882, the Denver and Rio Grande was completing its railroad from Durango into Silverton. The next year while Mears and Walsen were extending their road from Red Mountain to Silverton, the D. & R. G., thru its construction engineer, Thomas Wigglesworth, was making a survey for a railroad from Silverton to Red Mountain and Ironton Park. Nothing came of it but one wonders if it did not give Mears the idea of building the railroad himself.

The S. R. was incorporated on July 5, 1887 and chartered July 8th. Mears was president of the company and John L. McNeil was treasurer.¹ Since much of the Rainbow Route toll road grade was used the railroad often went by the same name. Incidentally a new wagon road had to be built.

¹ We have found no notation to the effect, but without doubt Walsen was an incorporator and official of the S. R.

The first part from Silverton to Chattanooga was not so difficult but Red Mountain must needs be ascended on a steep grade and by many curves to the summit, Sheridan Pass, altitude 11,235 feet, which, by the way, is a later figure than that on the map. The line would have to go around a succession of curves to Red Mountain town and over more and worse curves, grades and switchbacks from there down to Ironton. The greatest of engineering skill was necessary to accomplish such an undertaking.

The 5.3 miles of railroad from Silverton to Burro Bridge must have been constructed in the summer of 1887 for it is known to have been operating by the first of June the next year. In 1888 Charles W. Gibbs,² who had served under Mr. Wigglesworth on a number of projects, became the locating and construction engineer. He started late in May at Burro Bridge and early in November had completed 11.2 miles thru Red Mountain and to Ironton. Only 11 miles in over five months! But anyone acquainted with the country is not surprised. Spurs, then or later, were laid to the Yankee Girl, Vanderbilt, North Star, Silver Bell, Guston and Treasury Tunnel. The map here included in Mr. Poor's map was made by Mr. Gibbs and appeared in a September 1890 Bulletin of the American Society of Civil Engineers. Mr. Gibbs built the 1.5 miles from Ironton to Albany in 1889.³ Albany was the Saratoga mill which once stood against the east hill of Ironton Park. His report notes 5% grades,⁴ 30° curves,⁵ 3 feet gauge and 30 lb. rail used. Mr. Pitcher, Mears' son-in-law, gives the cost of construction as \$725,000 which would have been about \$44,000 to the mile.

In 1888 Mr. Gibbs was writing love letters to Miss Adeline Hammon of Colorado Springs and the next year married her. She has kept his letters these 60 years, from which the following excerpts, dealing with the construction of the railroad from Burro Bridge to Ironton, were taken.

"Chattanooga, June 10, 1888. Arrived here bag and baggage about three weeks ago and have my headquarters 10,200 feet above sea level and my next camp will be still higher, about 11,000 feet. More than 100 Mexican workers camped nearby."

"Gustine Mine, July 22, 1888. I am occupying the house of a former mine superintendent and have many conveniences not found in a railroad camp. Went to Silverton on the passenger train last night and returned this morning. Regular trains are running to where my first camp was (Chattanooga) and in a month's time will be here and maybe they will get track laid before that as the grading will be done in two weeks time. About 400 Mexicans working."

"Gustine Mine, August 11, 1888. Work is getting along splendidly and during this week I will get surveys made to Ironton which is as far as the line will be built this year. By the middle of next week the work

² Mr. Gibbs is alive and 89 years old.

³ The mileages used are from the R. L. Kelly survey of 1892.

⁴ Five feet of elevation to 100 feet of distance.

⁵ Imagine a semicircle of 607 feet (radius 193.2 feet); any part of it would be a 30 degree curve.

will be only two miles from here and in a very short time at my door."

"Gustine Mine, September 16, 1888. Construction work will be done in about five weeks; then I shall go to Telluride to make a short survey for a three foot gauge road."

"Ironton, October 3, 1888. Since writing you I have moved from the Gustine Mine to Ironton and we are living in a large vacant hotel, lots of room but not the conveniences we had at the mine."

"Ironton, October 29, 1888. Since my last letter to you I discharged all my men but one and had moved to Silverton but was put in charge of the work train and the track laying outfit so am back in the grader's camp but will be done in about a week."

Wyes were placed at Sheridan Junction, Red Mountain, Ironton and Albany. The company used the D. & R. G. wye at Silverton. Very little room was available at Red Mountain so only a little one could be made—one just big enough to accomodate an engine and a car—and the depot sat in the middle of it. Switchbacks are used when there is no room for a loop. The line had two, one at Red Mountain and one at Corkscrew Gulch. The first is famous because of having the wye and depot and the last is famous because of having a turntable. The table was housed over to keep the snow out; otherwise it would have been unoperable in the winter.

The railroad and road followed practically the same route from Silverton to Ironton, crossing and re-crossing each other several times. They both started out on the east side of the canon, crossed to the west side at Chattanooga and climbed Red Mountain to the summit, curved back to Red Mountain town on the east side, turned to the west side again at Ironton and below there, the railroad first and the road a little farther on, crossed to the east side again. The railroad, except at crossings, kept at a higher and more even grade than the road.

The railroad had been projected to Ouray, 26.6 miles in all. Mears might have used his toll road but that was, in some places, 19% grade, out of the question for a railroad. The steepest ever attempted in Colorado was 7.6%. Construction from Ironton to the foot of Ironton Park would have been easy but there the canon begins where the greater part of six miles would have had to be blasted out of solid rock, where slide rock could do much damage, where snow blockades would have been continuous for a long winter and where snowslides, two in particular, the Riverside and the Mother Cline, that ran every year, would have been very troublesome. The Riverside slide that came from two sides, filling the canon and burying the wagon road, often had to be tunneled to accomodate the summer traffic. The writer with her parents was thru one in the summer of 1903 or '04. The idea of the railroad was temporarily abandoned. At the same time surveys were made for another branch of the system, one that was to go up the Animas River from Silverton to Mineral Point, 19 miles, and possibly across the divide to Lake City.

Thru operation began in June 1889. The claim that two daily passengers ran to Ironton has generally been hooted at but the following table for 1889 copied by M. C. Poor from the Official Railway Guide of May 1891 proves the point.

SILVERTON RAILROAD

Otto Mears, President
 S. K. Hooper, General Passenger and Ticket Agent, Denver, Colo.
 Moses Liverman, General Manager and Ticket Agent, Silverton, Colo.

Oct. 23, 1889

⁷ Mixed	⁷ Pass'r	Miles	⁷ Pass'r	⁷ Mixed
Lv. 7:00 A.M.	Lv. 1:10 P.M.	.0	6Silverton	Ar. 11:10 A.M.
7:34 A.M.	1:44 P.M.	5.0	Burro Bridge	Ar. 5:20 P.M. 10:36 A.M.
7:49 A.M.	1:59 P.M.	7.5	Chattanooga	4:46 P.M. 10:21 A.M.
8:11 A.M.	2:21 P.M.	12.5	Summit	4:31 P.M. 9:58 A.M.
8:25 A.M.	2:35 P.M.	15.0	Red Mountain	4:09 P.M. 9:50 A.M.
8:26 A.M.	2:36 P.M.	15.5	Vanderbilt	4:00 P.M. 9:44 A.M.
8:27 A.M.	2:37 P.M.	16.0	Yankee Girl	3:54 P.M. 9:43 A.M.
8:45 A.M.	2:55 P.M.	17.0	Paymaster	3:53 P.M. 9:25 A.M.
Ar. 9:00 A.M.	Ar. 3:10 P.M.	20.0	Ironton	3:35 P.M. Lv. 9:10 A.M.
				Lv. 3:20 P.M.

⁶ Connects with Denver & Rio Grande Railway.

⁷ Daily except Sunday.

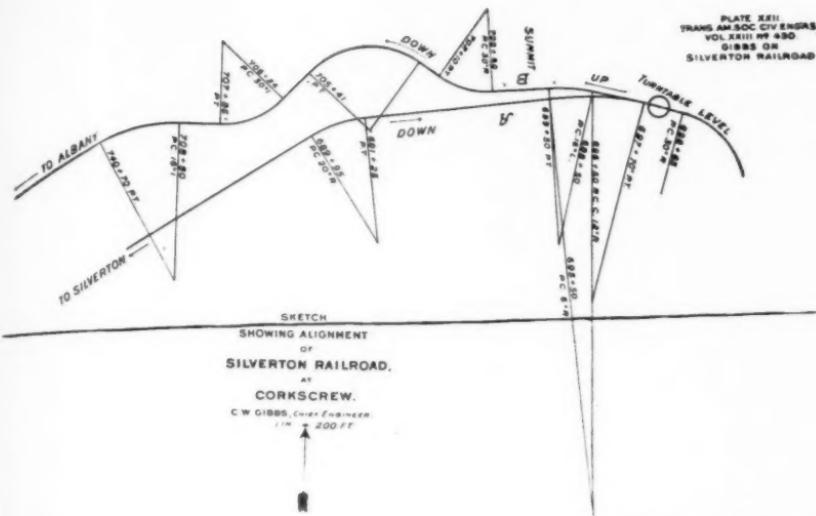
Note:—The author believes the first two headings above, "Mixed" and "Pass'r," have been transposed. A train arriving at Ironton at 9 A. M. should have left at 9:10 and one arriving at 3:10 P. M. should have left at 3:20.

Everything was finished and working properly. Mr. Gibbs must have had the feeling of "well done" and that he deserved a reward. Mrs. Gibbs, nee Miss Hammon, tells the following story:

"Late in September of 1889, Mr. Gibbs and I were married at Colorado Springs and started for Silverton, going by the way of Montrose and thru Ouray where we stayed overnight at the beautiful Beaumont Hotel. The next morning we rode the stage to Ironton and there transferred to the little Silverton Railroad train. As we climbed the grade toward the summit the conductor came thru the coach where I was the only passenger and asked me if I were cold. I couldn't deny it so he stopped the train, picked up some wood along the track and built a fire in the little pot-bellied stove.

"In November and December, Mr. Gibbs made a preliminary survey from the town of Dallas to Telluride, which was to be the route for the Rio Grande Southern Railroad, and finished the day before Christmas. We stayed overnight again in Ouray and left next morning in a snow-storm. When we reached Ironton my husband heard the line was blocked by snow so he left me with the Strayers while he went on to Silverton.

"He made arrangements for me to meet him in Red Mountain on New Year's day, which I did. Two men, besides us, were going to Silverton. A shallow trail had been beaten in the deep snow between the rails. The two men held the ends of a ski pole while I hung to the middle of it and we plodded down the track. We came to a sharp hair-pin curve and cut it out by sliding downhill from the track above to the one below. A few miles farther on we reached an engine with a snow-plow and at last we were safe. When we reached Silverton and got to our room a nice warm dinner was sent up to us by Moses Liverman, superintendent of the S. R.



Sketch showing alignment at Corkscrew.

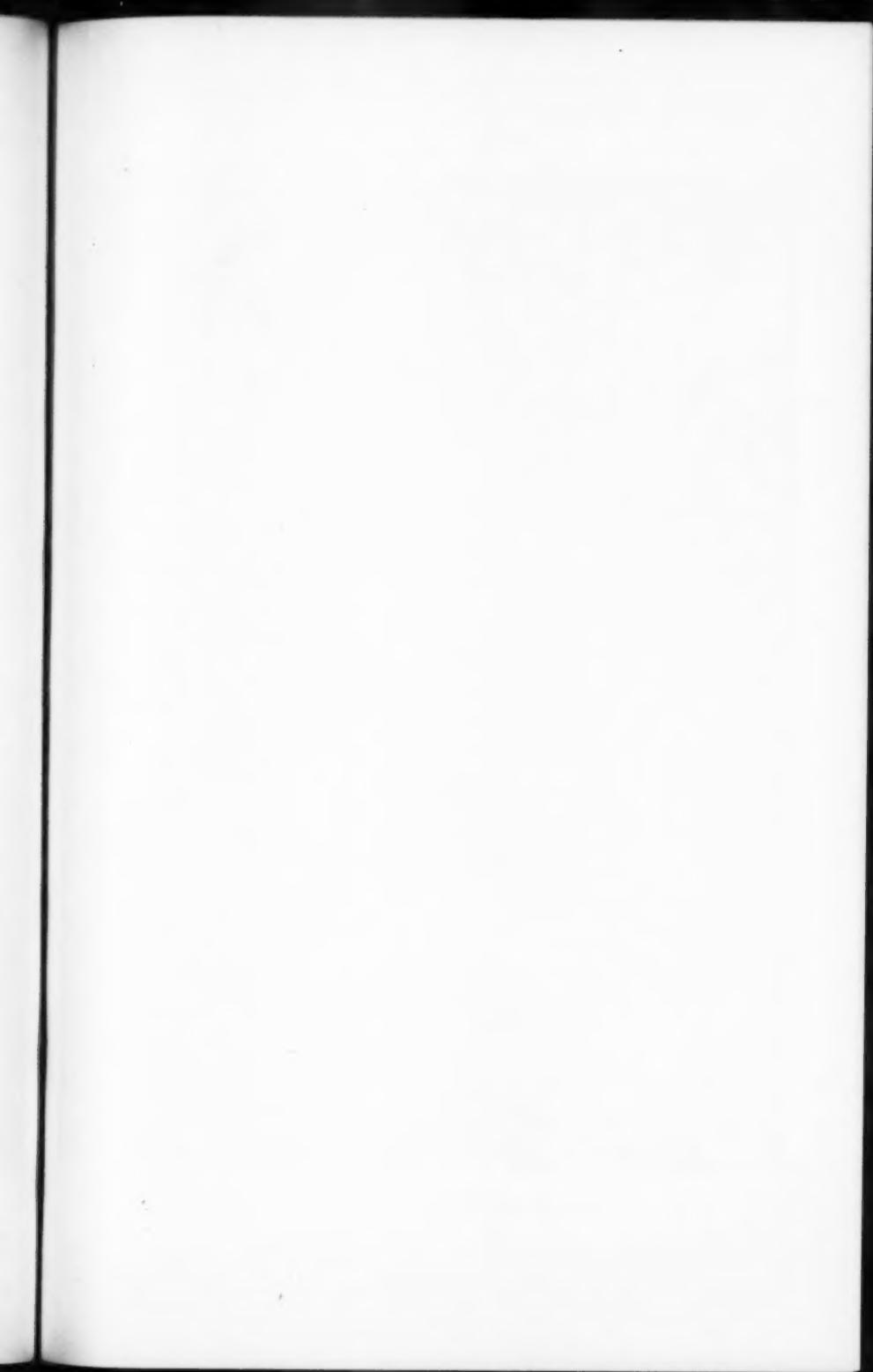
Courtesy of Morris W. Abbott



Courtesy of C. W. Gibbs

The two levels of track adjacent to Corkscrew Gulch turntable. Ironton in valley.







Courtesy of C. W. Gibbs and J. C. Thode

The housed over turntable at Corkscrew Gulch, the most famous in the world.

"A few days later we left for my husband's old home in Maine. This is what he had planned for our wedding trip but my daughters have always maintained that the others to Silverton by stage and train with all their difficulties were really my wedding journey."

The table below was furnished by Mr. Ridgway. Joker Tunnel did not exist at the time of the map but was projected by 1892. The second column of mileages were taken from the 1892 survey of locating engineer, R. L. Kelly.

Station	Mears Timetable of 1889	Actual Mileage, 1892
Silverton	0.	0.
Burro Bridge	5.	5.3
Chattanooga	7.5	7.2
Summit (Sheridan Pass)	12.5	10.7
Red Mountain	15.	11.9
Vanderbilt	15.5	12.5
Yankee Girl	16.	12.7
Paymaster	17.	13.7
Corkscrew Gulch		14.1
Joker Tunnel		15. ⁸
Ironton (Depot)	20.	16.5
Albany		18.

The exaggerated mileages of the 1889 timetable would have added considerably to the freight charges, in the case of Ironton over 21%. It will be noticed beginning with Red Mountain each Mears figure is 3 to 3½ miles more than the Kelly figure. Mr. Kelly was one of the ablest engineers of his day and his mileages are no doubt correct. People who are familiar with the territory, the writer among them, know that it could not have been 20 miles from Silverton to Ironton by railroad.

The table below was copied from an Official Railway Guide of October 1893 but no date is given for the time it was in effect. It probably was for 1890 or '91, at any rate before Joker Tunnel was projected. It is interesting because the mileages are different and because at the time only one passenger train was running.

I	M		Stations	2
7:30 A.M.	0	Lv.	Silverton	11:50 A.M.
8:00	6		Burro Bridge	11:40
8:10	9		Chattanooga	11:30
8:30	13		Summit	11:10
8:40	14		Red Mountain	10:50
	15		Vanderbilt	
8:55	15		Yankee Girl	10:45
	16		Paymaster coal track	
9:10	17		Corkscrew Gulch	10:25
	18		Paymaster ore track	
9:20 A.M.	20	Ar.	Ironton	Lv. 10:00

⁸This was probably where the tunnel was. The station added later was a mile farther on.

Special passes were designed for this railroad. In 1888 Mears put out the buckskin pass, in 1889 the solid silver and in 1890 another of silver called the watch fob or medallion pass. Then in 1892 he issued the gold and silver filigrees, primarily for the Rio Grande Southern but usable, also, on the S. R. It is doubtful if any other railroad in the world, no matter how large and important, was ever so honored. For more comprehensive information about the passes see R. & L. H. S. BULLETIN 73 or a booklet on the subject obtainable for 50 cents from Mrs. J. H. Crum at Durango, Colorado.

Mr. Mears revived the idea of a railroad from Ironton to Ouray as is told by Mr. Arthur Ridgway:

"The assumption that Mr. Mears contemplated extending the S. R. from Ironton to Ouray is correct but he was deterred because of its being so formidable an undertaking. He may have considered Albany as the possible point for the origin of the extension at first but later Ironton proved the more feasible. Anyway he had a preliminary location for an *electric* railway, Ouray to Ironton, made in 1892 by the then noted locating engineer, R. L. Kelley. No doubt the impracticability if not the utter impossibility, of operating steam locomotives over the heavy grades and severe curvature known to be necessary dissuaded him from the purpose until the recognized practicability of electrical railway operation became apparent in 1892. Whatever the delay (a long one for Mr. Mears) it was not until 1892 that a survey was made and even then, as stated before, for electrical operation. The map I have of the completed location shows a line starting from a connection with the Rio Grande at the Ouray depot, 8 miles in length, to a connection near the Ironton depot, incorporating 7% maximum gradients and 35° maximum rate of curvature. With even these severe physical characteristics considerable tunneling was necessary. I do not have the estimated cost of the project but it must have been staggering. It is small wonder that with the difficulty of financing so costly a scheme and the great financial panic a year later, in 1893, together with the contemporary decadence of silver mining the project was permanently shelved by even the visionary Mr. Mears."

D. & R. G. track already lay between Ouray and Ridgway and between Durango and Silverton. Mr. Mears, by the end of 1891, had completed the Rio Grande Southern from Ridgway to Durango. Only the eight miles from Ironton to Ouray were needed to make a complete 25.7 mile circle. If only that eight miles could have been constructed! Then a sightseer could have started at Ridgway, gone via Telluride, Durango and Silverton and back to his starting point. He should not have attempted it in the winter or spring because of snow blockades or snowslides but in the summer or fall he could have had the thrill of a lifetime.

He would have looked upon or wended his way among snow-capped peaks, hundreds over 12 or 13 thousand feet high and some over 14,000 feet,⁹ many so sharp as to be termed needles; would have crossed several

⁹ There are 14 in the San Juan Mts.

passes, one over 10,000 feet and another over 11,000 feet in altitude; would have gone up one canon and down another, often beside rushing, tumbling rivers. He would have gone over breathtakingly high bridges, over trestles set against bare cliffs, around U curves innumerable, over switchbacks, a turntable, thru rock tunnels and even snow tunnels.¹⁰

But the thrills and scenery would have been tempered with trouble, that trouble-trouble-boil-and-bubble kind, such as delays because of the engine having to blow up, hot boxes, trees across the track, big boulders on the track, a mudslide, a washout, a derailed engine, an overturned car and a missing bridge.

If his luck was still holding he would have ridden the last lap on the electric railway, down the awesome Red Mountain Creek and Uncompahgre River Canons where sheer rock walls would have risen hundreds of feet above him and dropped hundreds of feet below him and as he turned a last curve he would have beheld the never-to-be-forgotten sight of the little town of Ouray, the gem of all mountain towns, nestled in a deep pocket surrounded by towering peaks.

Albany was not shown on either of the timetables as a station but an old ticket to the place has been seen. In 1896 the Company claimed 18.25 miles of track from Silverton to Albany, 3.75 miles of branches, .48 miles of spurs. A United States Geological Survey of 1902 still shows Albany and Ironton tho everything north of Joker Tunnel had been abandoned several years before that time. The explanation is either that the maps lagged as time had to pass between the gathering of material and its publication or that they were copies of older ones.

Poor's Manual of 1890 lists two engines, one passenger car and one baggage car. The engines could have been any two of the three, the 100, the 1 and the 269. The 100 and the 1 were Baldwins of the 60 and 56 classes respectively. The 269 or "Ironton" as it was called, was a Shay, a queer looking creature with the cylinders on the side and some cogs where wheels should have been. It was transferred to the R. G. S. Tradition on the R. G. S. says that two of its engines were traded to the S. R. for the Shay. If they were no one living knows of it but an old picture shows a "5" at Summit that might have been one of them. In 1896 the railroad had two locomotives, three combination cars, 36 box cars, one caboose and one "other." In 1899 it claimed only one engine. A 1905 Manual lists one locomotive, two passenger cars, one baggage car, 26 box cars, one caboose and one miscellaneous car. The 100 and the 1 were both in service for several years past this time. It is probable Mears considered the 1 as belonging to the Silverton Northern which had been built in 1896.

If a train needed to turn at Red Mountain the engine and baggage car went around the wye and hooked onto the other end of the coaches. If a train was going north and beyond Corkscrew Gulch the cars were left on the upper leg of the track at Corkscrew while the engine turned on the table and pulled up on the lower leg. The cars were dropped onto the turntable and the engine backed down and got them tho hooked

¹⁰ One snow tunnel was on the D. & R. G. line four miles south of Silverton. In bad snow years the slide might not all be melted until late in the summer.

to the other end. The same operation was used on the way back as the track sloped down for about 300 feet to the table. Trains could be turned at Ironton or Albany as wyes were at those places. After the line north of Joker was abandoned a train heading into Joker had to back to Corkscrew and vice versa. Then after the turntable was taken up a train heading out of Red Mountain had to back out of Corkscrew, head out of Joker and back out of Corkscrew to get back to Red Mountain. Or if it started backing out of Red Mountain the whole operation was reversed. All that in an eight mile round trip! As trains will not back thru much snow downhill and hardly any uphill this railroad certainly got into trouble in the winter no matter how it started out or what it did.¹¹ And if it did not back, engines, cars and crew must all have been dizzy.

Sometime during the early years the turntable acquired a long entrance shed at the front end as may be seen in a picture. It was still at Corkscrew in the summer of 1905 for J. H. Crum, who that summer drove a logging team from Albany Gulch to the Gold Lion mine, at night turned his horses loose on the flat nearby and in the morning had to play tag with them around and around the table to catch them. He saw it operate and it still had the housing. Either that fall or the next spring it was taken up and placed at Animas Forks on the Silverton Northern.

Red Mountain and Ironton became two flourishing towns with plenty of stores and all the appurtenances of civilization. In the eighties and early nineties Red Mountain had three newspapers. In 1890 it had a population of 598 while Ironton had 322. Even Chattanooga had a mill, some stores and 51 people. The locality was a beehive of activity as mines and mills were working everyplace. The hills were liberally sprinkled with houses, mills, boarding houses, stores, barns and mine buildings. The transportation of supplies to the district—machinery, lumber, living necessities and feed for animals—must have been terrific for such little trains to handle. Return trains carried ore bound for the smelters at Silverton and Durango. A company, in which Mears was interested, built a smelter, the Standard, at Durango in 1889, to handle copper ore but it did not prove a success. The slag pile may still be seen just south of town.

Freight is the lifeblood of a railroad. While business was good four regular freights and two or three extra ones were working. The company did not have enough engines for such traffic so it must have been borrowing from the D. & R. G. Passenger business is only a side line but Mears maintained the dignity of this little railroad by running daily, each way, two passenger trains, each with two or three coaches and a baggage car. He charged 20c per mile straight, no reduction for a round trip, and found plenty of riders. After the panic of 1893 when most mines were closed only a mixed freight and passenger operated.

The S. R. was very profitable, one of the best or the best for its size in the state while times were good. Mears used profit from it to finance the building of the Rio Grande Southern and to keep it going after it

¹¹ The foregoing data was supplied by Mr. Meyer—his personal experience.

was finished. Revenues on the S. R. decreased greatly after the panic in 1893, which brought on a receivership in 1898. Alex. Anderson was appointed receiver. Mr. Ridgway says the Crawford Interests who were promoting the Joker Tunnel got control of the railroad in a foreclosure sale in 1904 and on November 3rd it was incorporated as the Silverton Railway. Mears was made manager tho in a few years we find him to be owner again. The new company replaced the old 30 lb. steel with 45 lb. Mr. Ridgway as superintendent, 1904 to 1905, kept three sets of books: one for the S. R., one for the S. Ry. and one for the Silverton Northern.

Just before and after reorganization business revived until it was nearly as good as in the beginning tho the only one passenger train ever ran again and then only as far as Joker. The train consisted of two coaches and a baggage car to Red Mountain where one coach was set out and the rest went on to Joker. In 1912 a daily passenger was running only as far as Red Mountain which may have been partly because of less business but more because of the difficulty of negotiating the sharp curves and switchbacks beyond. In 1919 and '20 a passenger was still going to the same destination. During this period about two freights operated tho the number depended on the amount of business. A little engine could haul three loads up to Red Mountain and a big one could haul five. Both handled about ten loads down. In the winter, operation was suspended either for short periods or for the season because of snow blockades.

Mears was employed by the D. & R. G. to reconstruct the railroad in the Animas Canon after the disastrous flood of October 5, 1911. He used S. R., S. G. & N. and S. N. engines and crews to work from the north end. Trains went to Joker Tunnel to pick up rails that had been brought that far by freight teams from Ouray. Silverton ran out of coal so some that had already been hauled up to the Treasury Tunnel was brought back to town. In about 60 days the line was open and the first freight cars to arrive were one of caskets and one of beer.

Below is probably the last table ever published.

SILVERTON RAILWAY
(Original name, Silverton Railroad)
Official Roster, 1923

Mileage	Station	Elevation
.00	Silverton	9,300
5.30	Burro Bridge	10,236
7.23	Chattanooga	10,400
10.64	Summit	11,235
11.97	Red Mountain	11,025
12.66	Vanderbilt	
12.85	Yankee Girl	
13.26	Robinson	
13.46	Guston	
13.93	Paymaster Coal Track	
14.38	Corkscrew Gulch	
14.81	Paymaster Ore Track	
15.03	Silver Belle	
16.06	Joker	

Many derailments and minor accidents occurred but in its 39 years of operation only one fatality. In 1902 or '03 an engine ran off a short rail at Sheridan Junction causing it to overturn. The engineer, Bally Thompson, was caught and crushed under the boiler. The whole top of his head and one jaw were torn off and his skin was cooked like that of a roasted turkey.

The year ending June 30, 1911, showed a cash balance of \$9. The year ending December 31, 1917, turned up with a deficit of \$25,241. About 1921 operation was virtually suspended. The track still lay to Joker in 1923 for the station is shown in the Roster of that year. Trains, tho, had not gone there for some time. The railroad was never absorbed by the Silverton Northern as has been reported but was a separate organization until abandoned. An occasional train went to Red Mountain until 1926 but that year saw the end of the Silverton Railroad or Railway, track removed and rolling stock disposed of. Now a few houses and mine buildings are scattered around the Red Mountain area; just one building, a house, is left in Ironton and not even a crooked board could be found in Chattanooga.

By three authorities, the new highway takes the railroad grade from just north of Burro Bridge and follows it for about two miles to Chattanooga. From there on for about four miles to $\frac{1}{2}$ mile beyond the pass, the highway takes the grade in spots or cuts into it or under it in other places. First a road, then a railroad and again a road!

This writer was born and raised in Ouray and had occasion to travel many times over the Ouray to Silverton wagon road. Often she saw the little trains and the impression that is left is of engines that puffed and chugged up a grade, of wheels and drivers that churned like mad and of trains that crawled along side hills or crept slowly and carefully around curves. Anyone who knew the railroad in its heyday when it cockily defied the world, has a great feeling of sadness over its ruin and disappearance.

(Copy made by John B. Marshall)

AMERICAN SOCIETY OF CIVIL ENGINEERS.

Instituted 1852.

TRANSACTIONS

450

Vol. XXIII—September, 1890.

**THE TURN-TABLE ON THE MAIN TRACK OF THE SILVERTON
RAILROAD IN COLORADO**

By C. W. GIBBS, M. Am. Soc. C. E.

WITH DISCUSSION

The Silverton Railroad is a short line but 17.5 miles long, and has the reputation of being the steepest (5 per cent grade), the crookedest (30 degree curves) and the best paying road in Colorado; and it is owned by one man, Otto Mears. It also has a turn-table on its main track, and it is the purpose of this paper to describe it and explain why it was so placed.

This road leaves the Denver and Rio Grande at Silverton, and runs over a divide 11,113 feet above sea level, then down into the rich mining country beyond. The country is very rough and rugged, and in order to reach the town of Red Mountain it was necessary to run up on a switchback, as no room for a loop could be found. A wye was, therefore, built, and the engine could be turned while the train stood on the main track. The engine was thus placed ahead of the train, only the train is pulled out of the station rear end ahead. It runs thus till the turn-table is reached. The train is stopped at a point marked A, Plate XXII; the engine uncoupled, run on to the table, is turned and pulled up to a point near B, where it is stopped. The train is then allowed to drop down to the turn-table and the engine is backed on to it. In coming up from Albany the train is stopped on the down grade between the summit at B and the table; the engine is taken off, turned on the table and ran up to about A; the train is then allowed to drop to the table as before and the engine backed up and coupled on, taking not over five minutes in going either way.

The reason of putting the table in was that there were no mines to the east of Ironton as shown on Plate XXI, but between the turn-table and the loop there were several that it was very necessary to reach, and the side hill is so steep that it is impossible to make a loop on it.

This table is the source of a great deal of comment from tourists, of whom there are many during the summer months, as it is on the line known as the "circle," so extensively advertised by the Denver and Rio Grande Railroad.

The road is used both for a freight and a passenger road, and as before mentioned, is the best paying road in Colorado, two engines being kept busy hauling ore to Silverton from the Red Mountain district.

The object of writing this paper was to describe what the author thinks is quite a novelty, being the only turn-table that he has ever heard of which is used upon a switchback in this manner, and where the grades are adjusted as they are to let the train run by gravity on the table from both ways.

Plate XXI is a print from a photograph of the map filed in Washington, and is about 9000 feet to the inch.

Plate XXII is an enlarged sketch of the line near the turn-table.

DISCUSSION

J. Foster Crowell, M. Am. Soc. C. E.—It occurs to me that the use of this turn-table being simply to turn the engine during transit, while the train waits, and, moreover, as the service is a special one on a spur line, it would have been better to obtain an engine capable of running in either direction and not requiring to be turned, rather than resort to a turntable in the main track which contains an element of danger as well as of delay to the traffic. The device, however, is an ingenious one to meet the peculiar conditions of the line; and if experience with it proves satisfactory, there are other problems on a larger scale relating to change of direction in mountain location that it may help to solve.

C. W. Gibbs, M. Am. Soc. C. E.—If a special engine had been procured, as Mr. Crowell suggests, it would have been at an extra expense, owing to the limited number wanted; and even with a special design, it might have been difficult for any engine to have backed its load over so steep a grade and such sharp curves without more danger than was suggested there might be at the turn-table. The delay to traffic amounts to nothing, for there are no competing lines, nor do I expect there ever will be. The turn-table has now been in actual operation every day since June, 1889, and no accident has ever occurred.

Re: SILVERTON RR. Copied verbatim from 4 pages of typewritten sheets in Yale Library, formerly property of A. W. Kidder & Co., 18 Wall St., NYC.
by Morris W. Abbott, 12-9-46.

THE SILVERTON RAILROAD COMPANY

Denver, Colorado,
March 28th, 1892.

Dear Sir:

I beg to hand you herewith a report from the auditor of the earnings of the Silverton Railroad for the years 1889, 1890 and 1891, showing also the mileage and the bonded debt.

I may add for your information that this road is built through the famous Red Mountain District of the San Juan country, in which are located the well-known Yankee Girl and Guston Mines, besides many other producing properties.



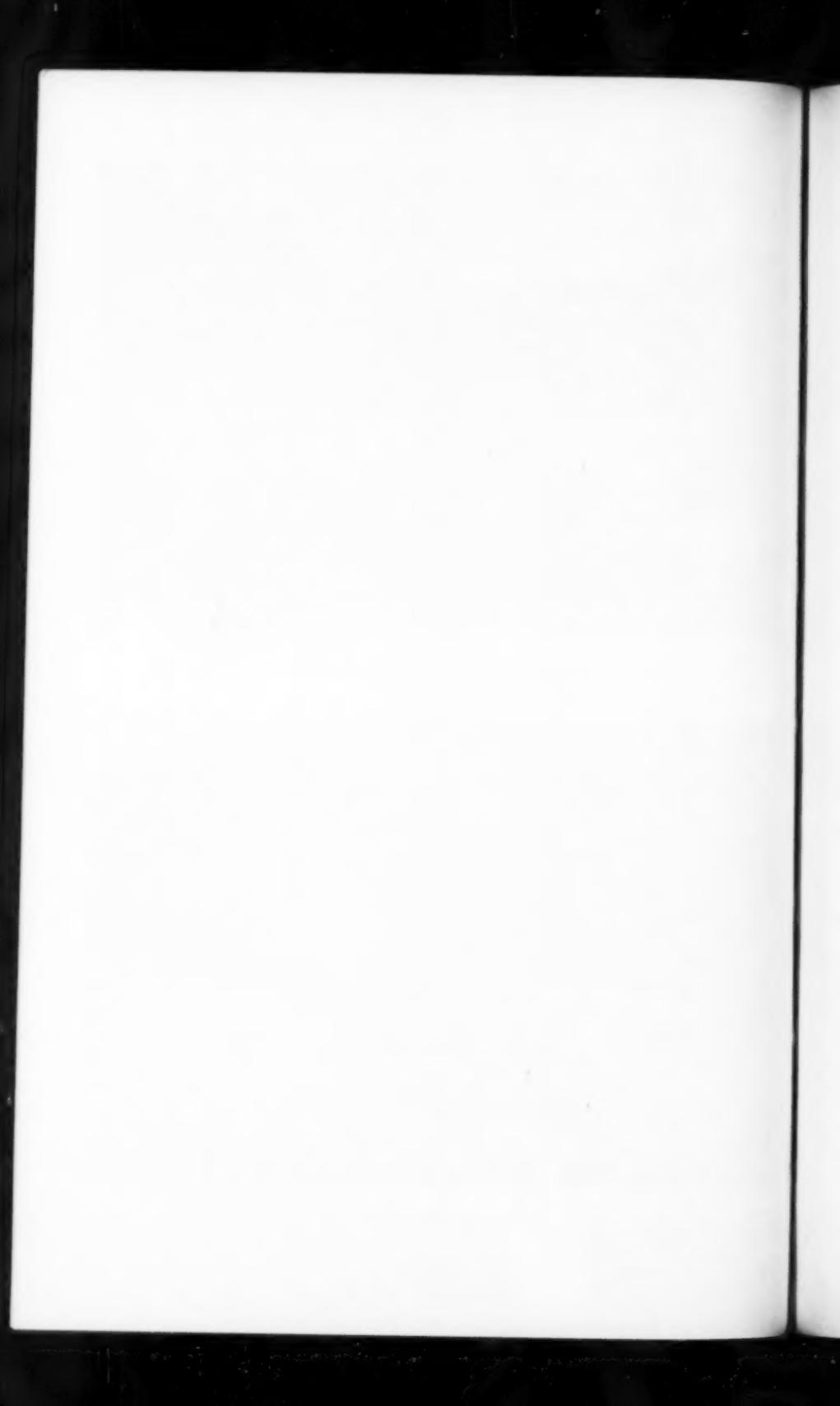
Courtesy of Ray Cooper and J. C. Thode

Wye with depot at end of Red Mountain switchback. National Belle mine at upper right.



Courtesy C. W. Gibbs and J. C. Thode

The famous Chattanooga Loop.







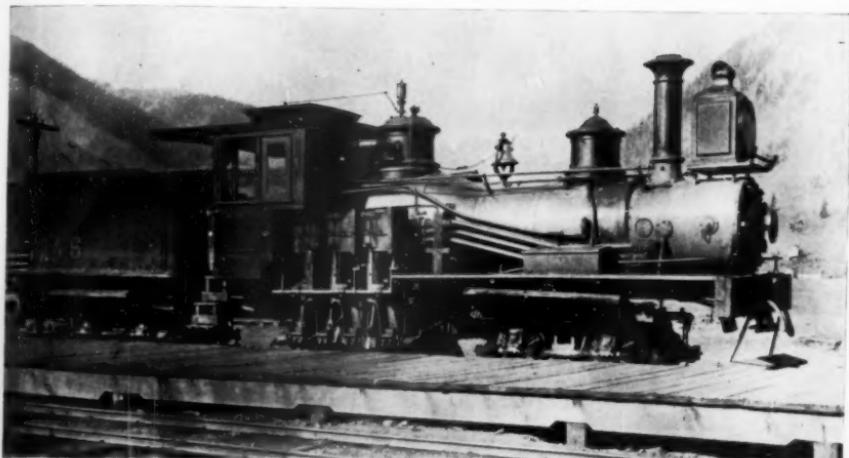
Courtesy of Westways

The two levels of the Chattanooga Loop. The loop itself is in the background.. The town would be to the lower right of picture. Mears stands near the cab.



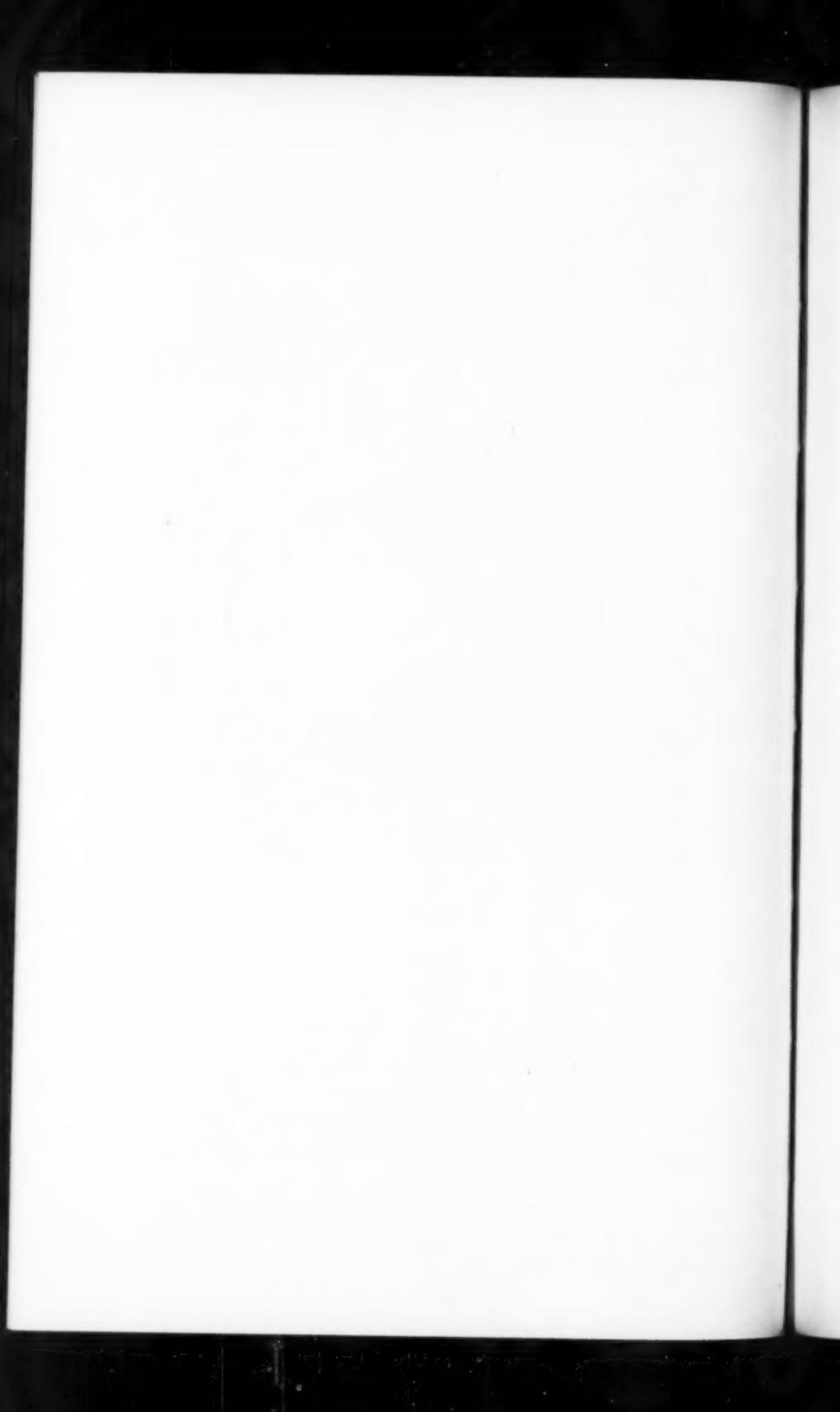
Silverton & Red Mountain RR

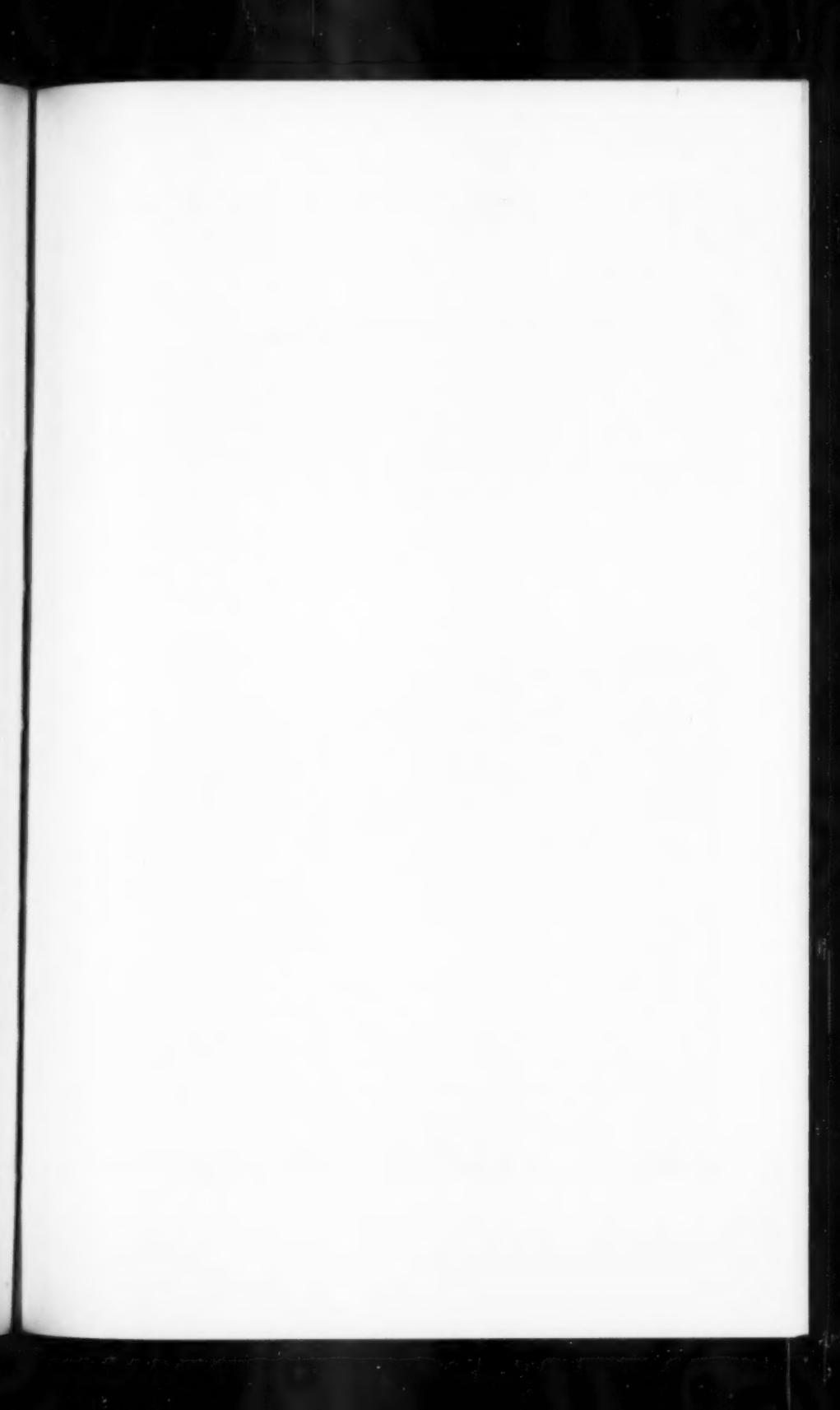
Courtesy of Denver Public Library Western Collection
Engine 100 and train. The Silverton Railroad reached Red Mountain in Sept. 1888. Mears standing at front of engine.



Courtesy of Denver Public Library Western Collection

The Shay engine called the "Ironton" traded by the Silverton Railroad to the Rio Grande Southern.
Picture taken at Silverton.







Courtesy of Lad G. Arend

S. G. & N., later S. N., engine 34. Was requisitioned by the government and sent to Alaska in 1942.
As far as known it remains there.



Courtesy of Morris W. Abbott

S. G. & N. train at Gold King mill.

This is the only road that can be built through this district because of lack of room. The mines mentioned are large producers, and there are many more which are being developed rapidly. This is one of the best known mining districts in the State of Colorado. From Ironton to the town of Ouray, which is reached by another branch of the Denver and Rio Grande, the distance is 7 miles over very precipitous country.

The reason the road has not been extended to Ouray is because of the excessive cost, but capitalists are now engaged in making estimates and plans for an electric road to cover this distance to follow the line of the Mear's Toll Road as indicated on the map. (No map accompanies the material found in the Yale Library). A line of this kind can be built to operate much more cheaply than a railway line, and we have good reason to expect that this gap may be so filled during this year. At the present time stages make daily trips each way over the Toll Road, and the trip from Silverton to Ouray is a favorite one with the tourists on account of the beauty and grandeur of the scenery on the Toll Road.

There is every reason to expect that the earnings for the year 1892 will be increased in the same proportion as in the past, and will continue for a great many years. The Silverton Railroad is also authorized to build up the Animas River. We would like very much this year to extend the Road in that direction some 12 to 15 miles in order to reach a very rich and valuable mining district. There are a great many very extensive mines of low grade material lying between Silverton and the summit of the range towards the northeast, and our object in offering to you the bonds of the present line of the railroad is to obtain funds to extend the line up the Animas River.

We can offer you at the present time \$400,000 out of a total of \$425,000. These bonds are issued in denominations of \$1000 each. The interest is payable semi-annually on the first of April and the first day of October at the rate of Six per cent. per annum in U. S. Gold Coin.

Yours very truly,
JOHN L. MCNEIL, Treasurer

AUDITOR'S STATEMENT

Earnings and Expenses Silverton Railroad, Years 1889, 1890 and 1891.

1889

Gross earnings from Frt. Psgnr. Exp. Etc.	\$ 80,881.66
Operating and all other expenses	34,285.04
	<hr/>
	46,506.62
Interest on first mortgage bonds 1 year	25,500.00
	<hr/>
	21,096.62

1890

Gross earnings from Frt. Psngr. Exp. Etc.	\$105,673.39
Operating and all other expenses	51,127.22
	<hr/>
	54,546.17
Interest on first mortgage bonds 1 year	25,500.00
	<hr/>
	29,046.17

1891

Gross earnings from Frt. Psngr. Exp. Etc.	\$121,611.38
Operating and all other expenses	57,548.37
	<hr/>
	64,063.01
Interest on first mortgage bonds 1 year	25,500.00
	<hr/>
	38,563.01

Length of line	17 miles
Length of side tracks	8 miles
	<hr/>
	25 miles

Floating debt	Nil
Bonded debt	\$425,000.00

ALEX. ANDERSON, Auditor

At the time the foregoing statement was made, the Company owned the following equipment:

3 locomotives,
2 coaches,
1 baggage and express car.

In addition to the above, the Company now owns 50 freight cars, which it has since purchased, and it also has a floating indebtedness of \$32,502.76.

ALEX. ANDERSON, Auditor

SILVERTON, GLADSTONE and NORTHERLY

The Gold King Mining Co., under President W. Z. Kinney, promoted a railroad for the purpose of hauling concentrates from mills along Cement Creek to the smelters at Silverton. James Dyson located the route and the Rocky Mountain Construction Co., incorporated in Maine, constructed the 7.5 miles of line from Silverton to Gladstone. Track left the main line of the D. & R. G. at the north end of Silverton and there a roundhouse was built. According to the Manual, the railroad was chartered April 6, 1899 and completed in July. San Juan County records show the property was conveyed from the construction company to the railroad company July 21, 1899. Two figures, \$247,838 and \$252,979, have been given as the cost of building.

Two engines, the 32 and 33, were bought second hand from the D. & R. G. Two coaches, that were made to order, had seats for passengers in one end and baggage compartments in the other. Two trains were run daily consisting, generally, of two loads and a passenger coach. The first year of operation showed a surplus of \$35,366.21.

A new engine, the 34, was bought in 1904. The Manual of 1905 lists 3 locomotives, 2 coaches and 20 freight cars and the one of 1909, 2 locomotives, 2 coaches, 10 box cars and 21 gondolas. Engine 32 must have been the one to be incapacitated at this time; eventually its boiler went to a sawmill at Cascade. Number 33 lasted a few years longer.

Except for Mr. Kinney of Silverton, the board of ten directors elected in 1904 were all from Maine, Massachusetts or New Brunswick and the trustee under the mortgage was the Newtonville Trust Co. of Newtonville, Mass. In 1905 the funded debt was \$100,000 and the outstanding stock, \$121,000. In the year ending June 30, 1909, the railroad had carried 16,667 tons of freight and 3,916 passengers.

It was not uncommon for service to be discontinued for short or long periods any winter on account of snow blockades but the suspension in the fall of 1911 was due to the extensive washouts on the D. & R. G.

in the Animas Canon. S. G. & N. men and equipment were used in its reconstruction.

Excursions were often run to Gladstone for picnics or to gather columbines either to send out of town for some special doings or for any kind of a local celebration.

According to the Official Guides of 1913, 1914 and 1915 mixed trains ran thrice weekly: Monday, Wednesday and Friday. In 1914 trains left Silverton at 1:00 P. M. and arrived at Gladstone at 1:45 P. M.; left Gladstone at 2:15 P. M. and arrived at Silverton at 3:00 P. M. This was a considerable decline from its original two trains per day.

About the first of January 1910, Mears, Slattery and Pitcher leased the Gold King mine. On January 15 of the same year the Silverton Northern Railroad leased the S. G. & N. and five years later, on June 10, 1915, bought it at auction. San Juan County records show the deed was made July 23. Mears then owned all three railroads. Only one S. G. & N. engine, the 34, was left. The partners gave up the lease on the mine in 1917 and Mears, then 77 years old, left for California, never to return.

Mrs. Percy Airy has a little story to tell of this period. In 1911 her husband was working at the Gold King mill at Gladstone and both were living in a little cabin with almost no furniture and conveniences. One morning while she was washing, Percy came rushing in, saying he was bringing his uncle, Jack Slattery, Otto Mears, James Pitcher and Louis Quarnstrom in for dinner. Flustered and dismayed were no words for it! At such a camp no fresh stuff was available but she managed a dinner of ham, scalloped potatoes, a canned vegetable, biscuits with butter and jam, fresh canned mountain raspberries, cake and coffee. She had only two stool chairs and one of them was occupied by the wash tub. She put one man on the other stool chair, two on the bed and two in rockers. Being very young, only nineteen, she was so embarrassed she didn't sit down at the table. Everybody praised her dinner and she felt better. When Mears left he presented her with a very rich piece of gold ore, about the size of a large orange, and told her if she'd alway keep that she'd never be poor. Later she took it to a jeweler and asked him to make a watch charm from it for her husband. She got back a small cracked charm and two small pieces of ore. The jeweler claimed he had had to break the ore all to pieces to get a charm of the desired perfection and had thrown the scraps away.

Business kept dwindling until only an occasional train was run. The Roster of 1923 contains the following table so the track must still have been in operation.

SILVERTON, GLADSTONE AND NORTHERLY

Official Roster 1923

Mileage	Station	Elevation
000	Silverton	9,300
3.2	Yukon Mills	
5.	Porcupine Gulch	
7.	Fisher's Mill	
7.5	Gladstone	10,600

No exact date can be found as to the junking of the railroad but it was in the middle twenties. All equipment went to the Silverton Northern from which engine 34 was requisitioned by the government in 1942 for use in Alaska. More about it will be told in the article on the Silverton Northern. One of the coaches was moved to Durango and set up as the "Pioneer Diner" on upper Main Avenue near Junction Creek. Later, after changes and additions, it became the "Chief Diner." Any other remains eventually went to a junking company.

SILVERTON NORTHERN

Mears in 1889 planned a railroad which, tho part of the S. R. system, was to run from Silverton to Mineral Point and possibly on to Lake City. It would have followed practically the same route as the wagon road he had built 12 years previously. C. W. Gibbs, who was chief engineer, ran the survey and another the next year but only as far as Eureka. Mr. Ridgway thinks nothing was done before 1893 when the part from Silverton to Howardville may have been constructed and, if so, with financial aid from Simon Guggenheim. Records in the San Juan County clerk's office give September 20, 1895 as the date of the incorporation of the Silverton Northern. Poor's Manual of 1899 states it was completed June 30, 1896. A picture is current, that shows the crowd at the celebration at Eureka when Mrs. Edward G. Stoiber drove the golden spike. The line, as first planned, followed much of the road grade. Fred Walsen was president of the company, Otto Mears vice-president and Alex. Anderson superintendent. These, with J. B. Frank and Moses Liverman, were directors.

In 1901 the company owned one locomotive, one passenger coach, ten box cars and one service car. For the year ending June 30, 1901 it operated 3376 miles of mixed and 1310 miles of passenger service. In 1902 it paid a dividend of 10%.

A little town was already established at Animas Forks near the then flourishing Black Prince mine. Mears decided to build a railroad to the place to get the ore and hired Mr. Thomas Wigglesworth as surveyor and constructor. The work had been comparatively easy from Silverton to Eureka but the construction of the four miles from there up the Animas Canon to Animas Forks would be difficult and over a 7 to 7½ per cent grade, the very maximum for a steam railroad.

Mr. Vest Day gives an account of the building of this part of the line:

"Mr. Thomas Wigglesworth, for whom I had worked several times before, hired me to get stuff together and go up to Animas Forks to establish a camp. Late in May of 1904 I loaded on the train at Durango about a car load of surveyor's equipment and camp supplies among which was a 350 lb. cookstove, all to be taken by rail to Eureka. There the two Peck brothers packed it on burros and, since the snow was deep and soft, they often had to spread gunny sacks out for the burros to step on, especially for the one with the stove, to keep them from sinking in too deeply. Everything arrived at Animas Forks in good order.

"The snow was six feet deep around the cabins we were to occupy so I had to shovel paths and dig down to get the doors open. Then I had to gather wood out of the tree tops but had the stove up and a good supper ready when Mr. Wigglesworth arrived with three other young fellows.

"We first did some preliminary surveying, running a line from Animas Forks to the divide in case Mr. Mears should decide on a railroad to Lake City. The snow was so deep we could not drive the stakes so we cut turning points in the hard crust with a hatchet.

"Then we started to work in the canon which was a hard problem and had labored a month trying to get a line up the east side when Mr. Wigglesworth said to Mr. Mears that he'd like to build the railroad on the other side where the road was. Mears told him to go ahead and take it as it was his road anyway. Even tho we used the road grade still a lot of work had to be done and R. T. F. Simpson, who was to run the commissary, brought with him from New Mexico, 100 Navaho Indians to do the rough labor. About 25 whites were employed but they acted as powder men, clerks or other such things. The four miles were completed in the fall.

While there Mr. Wigglesworth procured for Roy Goodman and me a railroad bicycle¹² that Mears had had made for Mrs. Stoiber. She was not at that time using it. This contraption had a framework to which was fastened four light weight flanged wheels with rubber on them, that ran on the track. Above was a platform on which were two stationary bicycles side by side. The riders treadled the bicycles and the two chains, that pulled the two rear wheels and were connected with two small wheels on the axle of the car, drove the car, making it run nicely on the track. We sure had a grand time going back and forth to Silverton on it."

Mr. Meyer says the Indians would stop work on any pretext but especially to chase groundhogs. Mears decided to put a stop to such foolishness so hired 25 white kids, furnished them with rifles and had them kill groundhogs. It didn't help much for the Indians could find plenty of other excuses to dawdle.

Mr. Ridgway states that when he came to the S. N. in October of 1904 work was still being done on this part of the railroad under the supervision of Marshall B. Smith, Mears' son-in-law, and with Navaho labor. It could not operate during the winter but began in June of the next year. In 1905, Mr. Ridgway surveyed and built a branch from Howardsville up Cunningham Gulch to the Green Mountain and Old Hundred mines which added 1.3 miles to the system. The S. N. must have been in financial straits at this time for Mears had to raise money in New York to pay interest on the bonds.

This railroad went north from Silverton as did the other two. The termini of the S. R. and S. N. were not much more than six air-miles apart with the S. G. & N. between. Animas Forks is at the foot of Mineral Point. One may ride out on top of Mineral Point, as this writer

¹² It was called "Judy."

has done, and see the waters divide, the Uncompahgre going to the north and the Animas to the south. Mears never got the courage to build a railroad up there as first projected nor on to Lake City.

During the year ending June 30, 1905, the railroad carried 31,433 passengers and 43,349 tons of freight. The Manual or Guide lists for 1905, two engines; for 1907, five;¹³ for 1909, three and for 1911, two. One or two passenger cars, one or two baggage and several freight cars were in its possession.

The S. N. used the S. R. engines, the 100 and the 1. One of the companies bought an old engine from the D. & R. G., which it numbered 2, but it was not much good and did not last long. Mears bought the 3 new in 1904 and the 4 new in 1906, both Baldwins of the 76 class. In 1910 the S. N. leased and in 1915 bought the S. G. & N. and got its engines, the 32, 33 and 34. Numbers 100, 32 and 33 were scrapped between 1909 and 1912 but #1 was still in use in 1915 and 1916 for it is shown in a picture of the "zinc" train that was running at that time. All four of those just noted sat for a number of years in the boneyard in Silverton. Numbers 3 and 4 did the snowbucking for 34 was too large for the plow.

Mears could always think up something novel and smart. He had already put out the silver and gold passes and had the railroad bicycle made but now he wanted to do something special in the way of a passenger coach for this run. He bought an old narrow gauge sleeper from the D. & R. G., that had been used on the run from Pueblo via Salida to Alamosa after 1890 and is thought to have been one of those that came to Durango and Silverton from '81 to '83. It had four upper and four lower berths on each side, half as many as a modern sleeper has. It was different, also, in that the berths had wooden slat bottoms instead of solid metal as we now know them. The berths were only used if the coach was parked overnight some place. Ten feet or less at one end was walled off for a kitchen while 20 feet or more was equipped with seats and tables. There was a menu card, lengthy and beautifully printed, and a liquor list to delight a connoisseur. Of course, a porter was present to administer the drinks.

The engine pushed the cars from Eureka to Animas Forks. It would not have done to have had them behind for if a coupling had broken the brakes would not have been able to hold them on such a steep grade and they would have run away and piled up. At first there was no way of turning at Animas Forks so the engine backed down pulling the cars, a decidedly risky business. Mears must have thought he needed the turntable worse at Animas Forks than at Corkscrew so, in 1905 or 1906, he took it up and moved it. Then the engine could turn and, by setting the cars on a spur, could get ahead and pull them down or rather hold them from running away. Before starting they tested the brakes most thoroly; then the brakeman stayed on top of the cars clubbing them all the way down. Everybody breathed a sigh of relief when they stopped at Eureka. They generally hauled a car of coal and an empty or a

¹³ An error. It could not have had that many at that time.

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Courtesy of Morris W. Abbott

"Stoiber Mansion" (Waldheim) and power house, near Silver Lake.



Courtesy of Mrs. William Terry

Engine 1 with ten cars of zinc concentrates from the Sunnyside mine, during World War I.

coach up and three cars of ore down. The biggest load ever taken up was a car of coal and a car of cement. Speed from Silverton to Eureka was ten miles per hour but from Eureka to Animas Forks, four miles, and the same on the return trip.

No history of the S. N. is complete without some mention of the Stoibers. Two brothers owned the Silver Lake mine up Arastra Gulch and the mill at the mouth of the gulch that may be seen on the map. Mr. and Mrs. Edward G. Stoiber owned Stoiber Waldheim which in German means the "Stoiber Forest Home." It, with its ball room and game rooms, was the finest plenty of money could build and furnish. Mrs. Stoiber, after her husband died, lived in Denver, then in Italy. The mansion went into ruin and was finally torn down. People are yet living on some of the fortune she left behind.

One summer in the early 1900's, a request came to Silverton for a great number of columbines for some national convention that was to be held in Denver. A "Columbine Special" train was run from Silverton to Animas Forks for the purpose of getting them. Mears donated the use of the train, trainmen donated their services and townspeople donated their time. They gathered what they estimated to be 25,000. A hardware man supplied washtubs in which the flowers were packed and shipped. They went out of Silverton on flat cars but were transferred to box cars at Alamosa. The columbines reached Denver and were displayed in front of the Denver Post building.

A picture of the front part of the zinc or "zinc special" train of World War I years exists. A newspaper item called the first shipment of ten cars "the largest ever made in Colorado." Zinc with copper made the brass that was used in shells. A train of 10 carloads of rich concentrates was shipped about once a week from the Sunnyside mill at Eureka, was picked up by the D. & R. G. at Silverton and transported to a smelter at Pueblo in 48 hours.

The Terry family, that owned the famous Sunnyside mine, said to be the biggest shipper the D. & R. G. ever had, was dickering with the U. S. Smelting and Refining Company regarding the sale of the mine and chartered a train for the use of those coming to investigate. A group of eastern capitalists—seven of them millionaires—accompanied by mining engineers, clerks, servants, etc., made the trip about January of 1917. The train was the D. & R. G. president's narrow gauge special, thought to be the only one of the kind in existence. The cars were beautifully finished and furnished. It was so outstanding and unique as to have been exhibited at the World's Fair in San Francisco in 1915.

Snow was pretty deep. Much good stuff was on the train and the crew got slightly befuddled. Just at the north end of Silverton the coupling back of the engine came loose and the engineer went several miles before he noticed he had lost the train. He did some quick thinking and plowed the track on to Eureka. When he came back he told everybody that the snow was so deep he thought it better to go ahead and clear the line and then come back for the train.

The outfit parked at Eureka for about a week while officials and engineers made a thoro investigation of the Sunnyside which, a few months later, resulted in the sale of the mine. On the way back to

Durango the train, called the "Million Dollar Special," was wrecked. The engine and three coaches turned over. Nobody was seriously hurt but two of the cars caught fire from the cookstove and completely burned.

In February 1906, three passenger trains on week days and two on Sundays ran between Silverton and Eureka. In 1914 only one passenger was running, six days per week. In 1919 and '20 a schedule as follows was in operation: Leave Silverton at 8 A. M. for Eureka, back at 10, leave for Joker Tunnel on the S. R. at 10, back at 2, leave for Eureka at 3, back at 5, two trips to Eureka and one to Joker seven days per week. In June 1933 service was indefinitely suspended. Passenger or mixed trains went to Animas Forks at first but we found no schedule concerning them. Whenever passenger service was good it is certain freight business was a lot better.

SILVERTON NORTHERN

Official Roster, 1923

Mileage	Station	Altitude
0.	Silverton	9,300
1.	Power	
2.	Waldheim	
3.	Robin	
3.2	Collins	
4.7	Howardsville	
0.	Howardsville	
6.1	Old Hundred	
6.3	Green Mountain	
6.2	Hamlet	
7.4	Minnie Gulch	
8.5	Eureka	10,000
	Astor	
	Lion Tunnel	
12.5	Animas Forks	11,200

The Pullman was in a couple of wrecks, the first in the spring of 1908. New rail was being laid and hadn't, in one place, been spiked. Meyer was the engineer and was pulling a train of three coaches going south when the accident happened near Silver Lake, two miles out of Silverton. The engine and one coach went over the rail all right but the next coach caught on it, turned over and pulled the Pullman over with it. When Conductor Hudson came along getting people out he found one woman with her head and shoulders clear thru a bottom window. The car had lit on a couple of ties which held it up preventing her from being crushed. Only her hat was knocked off. When settlements were made the worst casualty was found to be a box of peaches for which the owner asked and received 75 cents.

Another time, about 1910 or '12, a train was going north when, near Waldheim, the Pullman, which had too long a wheelbase for curves, gave a swing and the top part left the trucks flopping over and taking a



Courtesy of Morris W. Abbott

S. N. train leaving Silver Lake for Silverton. Date unknown, but link-and-pin coupler shows on caboose.



Courtesy of Morris W. Abbott

Silver Lake Mill, showing spur crossing Animas River. Taken from same point as above photo but looking in opposite direction.

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coach with it. Booker was the engineer this time, Hudson, the conductor and Ruble, the fireman. When they arrived they found dust so thick they could scarcely see or breathe. Ruble and Hudson walked along on the side of the coaches pulling people out of windows. They came to Mrs. William Terry, securely fastened and found the trouble—her skirt was caught between a rock and the side of the coach. Ruble used his pocket knife to cut a piece out of the back. The poor fellow never heard the end of cutting off the lady's skirt.

How Mrs. Terry remembers it:

"It was a Saturday afternoon in the summertime and the train was full of people going home from Silverton. In the Pullman everybody was talking and joking and having a good time. Suddenly the car gave a flop over on one side and everything was confusion. I was thrown against the slats of the berth and got several bumps on the head. I grabbed a handful of willows out the window which pulled thru my hand leaving green streaks that lasted for days. My skirt was caught at the back and someone cut a chunk out of it. It had been jerked loose from the waist, anyway, so it came off. But those were the days when women wore petticoats and I had on a nice one—one of iridescent taffeta, that rustled and had reams of ruffles.

"Broken glass had flown in every direction and many people had cuts. One woman, who had on a white dress came up to me and asked me if her hat was on straight. I told her it was but she better look at her dress. The whole front of it was covered with other people's blood. Another woman had a big slit in her lip. She was from the east and was paying a surprise visit to a brother she hadn't seen for 20 years. She said, 'I don't see why I came down here, anyway. I never did like him.'

"Passengers sat on the hill waiting for a train to come for them. Everyone was excited and upset. The porter went around offering drinks to help settle the nerves but I didn't take any. Cuts and bruises were the worst damages. The injured were put in a box car and taken to the hospital.

"My garb was a towel around my head, the coat of my just-past beautiful new plaid suit and the rustling ruffled petticoat. The suit, of course, was ruined as a skirt to match could not be obtained and I never got any damages because I was riding on a pass. I lost two combs too, that had real gold trimming."

The Pullman had made its last trip. It was pulled into the D. & R. G. yards where it sat for awhile, was gradually dismantled and finally burned. W. L. Bruce of Durango, about 1920, took some parts of the doors and door casings and some of the slats—all beautiful cherry wood—and made a porch swing.

The branch to Green Mountain did not operate very long because the mines up that way did not produce enough ore. The part from Eureka to Animas Forks is claimed never to have paid expenses and soon quit regular operation tho occasional trains ran until about 1923. Mears offered the right-of-way to the County if it would take up the track, which it did, and Mr. Meyer hauled the junk down in 1936. Now the railroad grade is a road again.

The section from Silverton to Eureka lasted the longest of any of the three little railroads. Ore was shipped over it from the Sunnyside mine and mill until 1939 when the mine closed down because of a miners' strike. In the summer of 1942 the property was advertised for sale for \$17,000 in delinquent taxes. Mrs. Cora Pitcher, Mear's daughter, sold it and paid the taxes. Moody's of 1945 states the railroad was sold to Dullen Steel Products Company in October 1942. The shop equipment, rails and rolling stock were shipped out that fall. The three engines, the 3, 4 and 34, were requisitioned by the government for use on the White Pass and Yukon Railway in Alaska. In 1947 Mr. Robert Le Messena received word from the War Surplus Board and the W. P. and Y. R. that 12 engines (7 D. & R. G.W., 2 C. & S., and 3 S. N.) were received by the Alaskan railroad but when Diesel power was obtained there, all except number 34 were returned to Seattle. M. Block & Co., a junking outfit of Seattle, stated they bought the 11 that were returned. The 34, as far as known, remains in Skagway.

In 55 years, 1887 to 1942, the three little Silverton railroads started, prospered, declined and perished and nothing, unless one considers still discernible roadbeds and rotting ties, remains to attest their existence. Yes, a few little ghosts remain—S. G. & N. engine 34, far away in Alaska; S. R. buckskin, solid silver, silver watch fob and silver and gold filigree passes scattered all over the U. S.; pictures of all three railroads likewise scattered all over the U. S.; and recollections that linger in the minds of people who knew them.

AFTERWORD

The author realizes the foregoing articles on the three little railroads are incomplete and inadequate but, considering the facts that no records of any kind were available, nothing concerning them has been written and preserved and very few persons are left alive to tell even an incident, it is remarkable that the little herein set forth could be obtained. The writer is particularly indebted to the persons who contributed reports, tables and data, all of which was picked up from such remote sources as engineers' journals, magazines, manuals, guides, annual reports and like publications. No doubt errors exist but every effort has been made to check all items, one source against another, and to present material that may be considered reliable.

Contributors—Arthur Ridgway, retired chief engineer of the D. & R. G. W. and once superintendent of the S. R. and the S. N., Edward Meyer, locomotive engineer for the three railroads and superintendent of the S. N., C. W. Gibbs, chief engineer, locator and constructor of the S. R., Mrs. C. W. Gibbs, Morris W. Abbott, M. C. Poor, William Wigglesworth (son of Thomas), Vest Day, John Marshall, Robert Le Messena, Ray Cooper, Joe Dresbach, John Terry, Mrs. William Terry, Mrs. Percy Airy, Mrs. Edward Meyer, Joe Lewis, Poor's Manual, The Official Guide, The Railroad Redbook, The Engineering News, The American Railway Journal and The Association of American Railroads.

New Books

RULER OF THE READING: The Life of Franklin B. Gowen, 1836-1889, by Marvin W. Schlegel. 308 pages, 8 $\frac{3}{4}$ x 5 $\frac{3}{4}$, indexed. Bound in cloth. Published by the Archives Publishing Co. of Pennsylvania, 410 Dauphin Building, Harrisburg, Pennsylvania. Price \$4.00.

Franklin Benjamin Gowen, the fifth of eight children, was the son of Daniel Gowen, an Irish tutor of 21, who landed at Philadelphia in 1811. Success attended his ventures in America and at 59, he retired as a gentleman agriculturist. Under his father's direction, Franklin B. worked early and late, studied under the strict discipline of John Beckboy's Academy, developed fine skill in penmanship, studied history and acquired a "persuasive skill with figures." At thirteen he was apprenticed to a Lancaster merchant who allowed the boy the full use of his library.

In 1858 Franklin B. Gowen went into partnership with James G. Turner, a Pottsville coal operator, and they leased the Mt. Lafee Colliery for ten years. Gowen moved to Pottsville, married, led a gay social life and became a shining light in the Literary Society. He had a fine vocabulary, a splendid voice and a winning personality, but—coal mining was not too profitable and the partnership was dissolved. He then turned to law, studied and was admitted to the Bar and hung out his shingle. He was elected district attorney but soon resigned his post as he had other plans than the prosecution of criminals. When his draft number came up in 1863, with a wife and three children, he sent a substitute. He was subsequently appointed the Pottsville counsel for the Philadelphia & Reading R. R. and, at the age of 31, he became the head of their Legal Department.

He watched uneasily the rise of the Workingmen's Benevolent Association in the coal region. They tried to keep the coal prices high but, high prices for coal meant less business for the Reading. In 1870 Franklin B. Gowen was elected president of the Reading. There were shutdowns, rate troubles, the railroad strikes of 1877 to mark his career. In the Railroad Riot Acts investigation, he argued the presiding judge into reversing himself. To control coal production, he decided the company should purchase the coal lands adjacent to its line. Agents were sent out to acquire these lands and they also acquired iron ore properties in the Cumberland and Hudson valleys. First known as the Laurel Run Improvement Co., within a year it was changed to the Philadelphia & Reading Coal & Iron Company.

Gowen set out to improve the company, to enlarge its capacity and to develop the territory. The slate was separated from the coal and the coal business, including the agreement with the association, contributed to his success. Other coal men watched his methods but, unable to meet the competition, merely waited their opportunity to strike back. Meantime, the railroad owning its own vessels could ship anthracite directly to New England and the South. The road on the whole prospered but some of his projects were failures.

His dramatic addresses in court, his obvious sincerity, his tremendous problems and his methods of dealing with them, his handling of the railroad's public relations—all make this book an interesting study. As Mr. R. W. Brown, President of the Reading Company states in his foreword—"he was one of the first railroad executives to advocate the Interstate Commerce Commission. He likewise approved the principle of collective bargaining. He was responsible for the first written labor contract in the mining industry and for the first important use of arbitration to settle a wage dispute. He set up the first non-contributing system of workmen's compensation in the anthracite industry, if not in the United States." You may disagree with some of Dr. Schlegel's conclusions, but it will not impair the value of this history.

THE FALL OF A RAILROAD EMPIRE, by Henry Lee Staples and Alpheus Thomas Mason. 209 pages, $7\frac{1}{2}$ x $4\frac{1}{2}$. Published by Syracuse University Press, 920 Irving Ave., Syracuse (10), N. Y. Price \$2.50.

This is the story of how one man, the late Louis D. Brandeis, fought the greed of one corporation—the New York, New Haven & Hartford R. R. The authors have based their statements on the Brandeis papers which were deposited with the University of Louisville and the many and various New England newspapers of that period. This struggle for the control of all of New England transportation properties and the flaming headlines that appeared in our newspapers is still fresh in the mind of your Editor.

In 1903, Charles Sanger Mellen came to the New Haven from the Northern Pacific R. R. as its president. Ten years later, Sept. 1, 1913, when he was forced to resign, the New Haven, once a wealthy and well managed corporation, was virtually bankrupt and in ruins, from which it has not recovered to this day and for which New England has since been penalized.

The plan—to acquire the Boston & Maine and through the latter the Maine Central; to acquire the competitive trolley lines and gas and electric light companies throughout New England; a joint interest in the Boston & Albany and later, a joint interest in the Rutland. In the time that has intervened, with the omission of the trolleys, gas and electric companies, had the balance of the plan been soundly and well financed, along with capable management, it would have been an asset to New England rather than the "headache" that it has been since.

The New Haven was the pet property of the late J. P. Morgan. The other directors, by their own admission, were greatly awed by his presence and he virtually dictated the terms. Money was recklessly squandered to purchase space in such financial newspapers as the Boston News Bureau, the other Boston daily newspapers and, with the prestige of the New Haven and J. P. Morgan, it seemed impossible for anything to go wrong. Some of the Bostonians demurred at New Haven control of the Boston & Maine R. R. and here the fight started to be waged relentlessly by the late Judge Brandeis. How it was done is the story of the book. The sad part of it all is—it was true.

Even our Interstate Commerce Commission seemed to suffer from partial blindness. By the shifting of bonds to one of its subsidiaries and in four days taking them back, the New Haven created a book profit of seven million dollars. Again, a paper profit of sixteen million dollars was created by selling to a subsidiary thirty-six million dollars worth of stock which it bought two years before from the same subsidiary for twenty million. In the Westchester deal, where every effort was made to keep the New Haven's name out of the picture, a check for a million and a half dollars migrated from the New Haven's account in the National Shawmut Bank of Boston to the Second National Bank of New Haven, from there to the First National Bank of Boston, thence to the New England Navigation Company's account in the National Shawmut—all so that Mellen's name would not appear in the transaction.

Well, it is all over now but one can't help but wonder if the present troubles of the Old Colony, or the part the New Haven insists must be abandoned, are not remotely connected with this decade of reckless finance and management. To those of us with grey hairs, the story brings back many a news headline but, it shows what one man, with determination, with right on his side, can do and, we can also add, that not many railroads have ever attempted and by such means as that done by the New Haven management under the direction of J. P. Morgan.

THE TRAINS WE LOVED, by Hamilton Ellis. 196 pages, $9\frac{1}{4}$ x 6, illustrated, 8 plates in color, indexed. Bound in cloth. Published by The Macmillan Co., 60 Fifth Ave., New York, N. Y. Price \$4.50.

While your Editor realizes that the subject of English trains and railroads does not greatly interest the average American, after reading this book, he cannot help but feel that Mr. Ellis has done a superb job in word painting. Many of our members must know that several years ago, the English railroads were merged into a few large systems. This step has now, on January 1, 1948, been climaxed with all roads being placed under The British Railways, controlled and operated by the Government. The publication of this book could not have been timed better.

The period covered is between 1874 and 1914. There are two chapters devoted to the Old Companies (England); a chapter each to the Scottish and Irish companies; another chapter to historical sketches of their locomotives; one to Carriages, good and bad which will more than interest the reader and finally one to Racing Days and another to Byways and Oddities. In short, the author takes you on a tour of the British Isles and his word pictures are vivid and interesting. Last but not least, in the appendix, is a description of the locomotive liveries and rolling stock of the British Main-Line Railway Companies.

You seem to see those beautiful blue Caledonian express locomotives racing with their train at seventy miles an hour through the Carse at Gowrie; the neat appearance of the Midland and Southwestern locomotives and the broad gauge trains of the Great Western. Fortunately, the author is possessed with a photographic mind and this, together with his ability to visualize makes this a wonderfully interesting book.

Hamilton Ellis became Assistant Editor of *The Railway Magazine* at the age of 24. Subsequently, he was one of the many authors of *Railway Wonders of the World* and *Wonders of World Engineering*. Invalided from the Army in the late war, he joined the staff of *Modern Transport*. He has written four romances for boys, is the author of a recently successful novel—*Dandy Hart* and is a contributor to many technical journals here and abroad. It is a book that can't help but stimulate one's interest in the trains of the British Isles and it is thought provoking in that someone in the U. S. A., before it is too late, should record for posterity some of the lighter colors used on our locomotives and trains before the dull black and Pullman green era, which has only been lightened recently by the gaily colored diesels and stainless steel equipment.

BONANZA RAILROADS, by Gilbert H. Kneiss. 187 pages, 10 x 6½, illustrated. Bound in cloth. Published by Stanford University Press, Stanford University, California. Price \$3.00.

When Gilbert Kneiss writes railroad history, you can rest assured that it is not only interesting but informative and accurate. For this book, originally published in 1941, is now in its third edition.

The book, in six chapters, covers the history of the Sacramento Valley; San Francisco & San José; Virginia & Truckee; Eureka & Palisade; Nevada Central and Nevada County Narrow Gauge Railroads. The chapter covering the last named road was not in the first edition. There has been a lot of research work done on these little roads and the author has not only shown his knowledge but his love for the subject.

The Sacramento Valley R. R. commenced building in 1854 and is a story of gold and polities. The San Francisco & San José was completed in 1864, a route now traversed by the famous S. P. "Daylight Limited." The Comstock mines will always be associated with the Virginia & Truckee R. R. Then, in 1875 came the Eureka & Palisades R. R. to serve the booming mining district of that name in eastern Nevada; the Nevada County N. G. came into being in 1874 because the Central Pacific had by-passed both Grass Valley and Nevada City. Throughout the entire book, the author has covered the most important facts, but furnished enough spice to liven its interest. The book is well illustrated, the drawings at the chapter headings by Arthur Lites add a touch of finish. An index together with a complete roster of the locomotives, together with their disposition is of great value and maps, inside the cover show the location of these roads. No matter if you don't live in California or Nevada, if you are interested in the history of these little railroads, you can't do better than own a copy of "Bonanza Railroads."

THE MILWAUKEE ROAD, by August Derleth. N. Y. Creative Age Press, 1948. 330 pages, 8 x 5¼. Price \$4.00.

Many of the so called "transcontinental" roads have more or less standard histories but until now there has been very little published on the Milwaukee, the only railroad going from Chicago to the Pacific Northwest. August Derleth's *The Milwaukee Road* shows considerable research as well as being accurate and reasonably comprehensive. He is,

perhaps, at his best in discussing the earlier history before and during the administration of that master railroader Alexander Mitchell. The pioneer attempts of Wisconsin to regulate its carriers culminating in the Potter Law is well covered as are the events leading up to the building of a unified railroad from Milwaukee to the Mississippi.

The latter years of the road are a little sketchy in spots but most of the significant events are noted in one place or another. Naturally, the Pacific extension looms large and it comes in for considerable discussion. A good deal of the text is solid reading with occasional references to "human interest" items such as the ill-fated hold up of No. 57 carrying approximately \$3,000,000, the fast preview run of the *Hiawatha*, and the retirement of Soda Ash Johnny who had almost 83 years service on the Milwaukee.

The development of motive power could be given more attention although it is not totally ignored. Fortunately the book is neither a "company" history nor one which is carpingly critical. The shortcomings of men and management are discussed, along with the fine tradition which has made the Chicago, Milwaukee, St. Paul & Pacific one of the progressive and well-operated railroads of America.

The volume is illustrated and contains an appendix covering the corporate and chronological history of the company. There is a bibliography and an adequate index.

FRANK DONOVAN, JR.

THE STORY OF AMERICAN RAILROADS, by Stewart H. Holbrook. N.Y. Crown Publishers, 1947. 468 pages, 9 x 6. Price \$4.50.

The Story of American Railroads is an informal popularized history. It is a good book to get the flavor and romance of railroading rather than painstaking accuracy and logical sequence. Stewart Holbrook has a colorful account of the rise and development of the country's railroads; a bit of history here, a dash of human interest there, and goodness knows what else in between. If it occasionally suffers in balance it more than makes up for it in novelty of approach and dramatic appeal.

Apart from rather loosely jointed sketches of the Pennsy, New York Central, Great Northern, Erie and a half dozen other roads, there are chapters embracing land grants, strikes, colonization, accidents and a host of other diverse subjects. The chief value of this book is not so much the repetition of orthodox rail history as it is in garnering up unorthodox events, themes and oddments. For example the first chapter titled "Panorama" graphically explains what the railroads mean to the country, to you and to me. Then toward the end of the volume is a section on news butchers, assuredly not a vitally important subject, yet one which has hitherto gone unnoticed until Holbrook nailed it. Again there is a chapter on Lorenzo Coffin who spent a good part of his life trying to foster by judicial edict the adoption of the air brake. Perhaps Holbrook overemphasizes the role played by Coffin in the safety movement, and yet how many standard histories even mention the "air brake fanatic" at all.

For the student of American folkways there are spirited chapters on rail drama and rail ballads. Indeed, even the hobo creeps into this 451-page story of the nation's railroads.

The many illustrations comprised of photographs, sketches, wood-cuts and posters are extremely well chosen and greatly add to the spirit of the work. An extensive bibliography and index rounds out the volume.

FRANK DONOVAN, JR.

EDWARD HUNGERFORD

Edward Hungerford, author of many books, producer and director of many railroad pageants and Vice President at Large of this Society, passed away at the Flower-Fifth Avenue Hospital, New York City, on July 30th, 1948 at the age of seventy-two.

Born in Dexter, N. Y., the son of Charles Anson and Cora Sill Hungerford, he attended Williston Seminary in Easthampton, Massachusetts and subsequently graduated from Syracuse University. He studied to be an architect and although his father did not approve of the change of plans, he joined the staff of the Rochester Herald. He then came to New York City and was a member of the staff of the New York Herald and New York Sun.

His first experience in the railroad field came as press agent for the Brooklyn Rapid Transit Company, later as advertising manager for the Wells Fargo Express Co. He also spent two years as director of publications at the University of Rochester (N. Y.)

His first railroad pageant was "The Fair of the Iron Horse"—the Baltimore & Ohio R. R. Centennial of 1927. Whatever may be said of his others, and they were all splendid, "The Fair of the Iron Horse" made a lasting impression on those that saw it. This was followed by the Rochester Centennial in 1934; the "Parade of Years" at Cleveland in 1936; "Railroads on Parade" at New York City in 1939 and lastly, "Wheels A' Rollin'" at Chicago, this summer, which he did not live to see in production.

One of his first books was "The Story of the Rome, Watertown & Ogdensburg R. R." (1922). A story of a not-so-small railroad, in his native section, with Orville Hungerford, the first President, his grand-sire. Many of us feel that this book set a pattern that might well be followed in the presentation of railroad history. Other books were "The Modern Railroad," in 1911; "Personality of American Cities," in 1913; "The Railroad Problems," in 1917; "Our Railroads Tomorrow," in 1922; "The Story of the Public Utilities," in 1927; "The Story of the Baltimore & Ohio R. R.," in 1929; "Pathway of Empire," in 1935; "Men and Iron," in 1938; "Locomotives on Parade," in 1940; "Transport for War," in 1943; "Railroad for Tomorrow," in 1945 and "Men of Erie," in 1946. His last book on the Wells Fargo Co. has not been released as yet.

Mr. Hungerford joined this Society when it was first formed, in 1921. He was elected a Director on January 13th, 1929 and served as such until his death, rarely missing an Annual Meeting. In 1930 he was elected Vice President, when other duties forced him to resign in 1935. In May of 1947, your Directors created the office—Vice President at Large, tendering it to Mr. Hungerford, which he accepted.

An inveterate traveler, he traveled for the sheer love of the railroad, yet his knowledge of the subject and his powers of observation caused him to miss no detail. His wide knowledge of the subject made him fine company and his periodic visits to Boston will be missed by many of us. Full of ambition to the end, it was his hope to be able to put the railroad in a movie. It was from the Pacific Coast that he made his last trip after being one of our group that enjoyed the outing on Memorial Day.

To appraise him, one must know him well. But, after all is said and done, few have been able to take the dull, day by day facts of railroading and assemble them into book form that were the equal of a novel. It was more than his ability, it was his genuine love for the railroad. His passing closes a door in railroad literature. So long "Ed"—may you always run on the long tangent and may the signals be green!

Worth Reading

Compiled by

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BOOKS AND PAMPHLETS

The Alaska Railroad—Twenty-Five Years of Progress—July 15, 1923—July 15, 1948, compiled by The Forty-Ninth Star [newspaper], Anchorage, Alaska, and published as its "Golden Spike Edition", July 15, 1948. 8 p. including illustrations. Price not stated.

Cincinnati and Ohio—Their Early Railroads, by Gustav Metzman. Cover-title, 32 p. Address at 1948 Cincinnati dinner, Newcomen Society, April 30, 1948. Price not stated.

Civilian War Transport—A Record of the Control of Domestic Traffic Operations 1941-1946, by U. S. Office of Defense Transportation. 361 p. Index. Issue May 1, 1948. Washington 25, D. C., Superintendent of Documents Office. \$1.75.

Daniel Willard (1861-1942)—From Woodburners to Diesels! by R. W. Brown. cover-title, 32 p. Address at 1948 St. Louis dinner, Newcomen Society, April 7, 1948. Price not stated.

The History of the Delaware and Hudson Company. pp. 3-28 in its Annual report for 1947—Commemorating the one hundred twenty-fifth anniversary of the founding of the Delaware and Hudson Company. New York, 1948.

Männer der Schiene, 1847-1947, by Ernest Mathys. 280 p. incl. ports, illus., facsimis., maps. Berne, Switzerland, Werner, Stucker, Liebefeld, 6.50 Swiss francs. Biographical sketches of 44 men who built the Swiss railways, with portraits of each, and illustrations showing what they built in the way of railroads, tunnels, bridges, stations, etc., in the first century of Swiss railroad extensions.

Men, Cities and Transportation—A study in New England History, by Edward Chase Kirkland. 2 vols. Cambridge, Mass., Harvard University Press. \$12.50. Vol. I—*On the Eve of the Railroad*. Vol. II—*Monopoly*.

The Need of the Railways for Additional Fixed-Plant Capital and Possible Means of Its Attainment, by James Garnett Lyne. cover-title, vii, 169 p. New York 7, N. Y., Simmons-Boardman Publishing Corporation. \$2.50. Author's "A note to the Railway Reader:" suggests ". . . To get to the gist of the theme . . . without painful plodding over familiar ground, the writer suggests that such readers skip chapters IV-VI, inclusive. . . ."

A New Chapter of Erie, the Story of Erie's Reorganization, 1938-1941, by Henry S. Sturgis, vii., 84 pp. [Cleveland, O., Erie Railroad] Price not stated. ". . . The earnings . . . since 1941 have permitted the payment of income bond interest in each year, and the preferred dividend as well. . . . A common dividend was paid on July

10, 1942, at the rate of fifty cents a share, the first since the days of Daniel Drew in 1879. Common dividends of one dollar a share per annum have since been paid regularly. . . ." (p. 56).

Operations SANTA FÉ—Atchison, Topeka & Santa Fé Railway System, by Merle Armitage. Edited by Edwin Corle. Drawings by P. G. Napolitano. 263 p. incl. illus. New York, N. Y., Duell, Sloane & Pierce. \$5.00. Bibl., pp. 251-252.

A Pioneering Railroad—Its First Century—Chicago and North Western System since 1948, by F. V. Koval. cover-title, 24 p. incl. illus. Chicago, Ill., C. & N. W. Ry. System. No price stated. Reprinted in Brotherhood of Locomotive Firemen and Enginemen's Magazine, July 1948, pp. 6-13.

The Portable White House, by Merriman Smith. Chapter 17, pp. 231-252, in his *A President Is Many Men*. New York, Harper Bros. \$2.75. "An odd fact is that the White House really is where the President is—in the air, under the sea and even in a fast-rolling train. . . . (p. 231) . . . Comfort in train equipment used by the White House is particularly important during election campaigns or extended trips across the nation. A group of as many as one hundred people may have to live on the train for two or three weeks at a time. Consequently, the train must function as a rolling hotel. . . . The newest thing about the White House train is the radio car . . . During a political campaign, the forward club car . . . is transformed into a large rolling office with desk space and lamps for thirty or more reporters, big mimeograph machines on which the White House staff turns out hundreds of copies of presidential speeches and loud-speakers hooked on to the rear platform of the President's own car so the reporters may hear every word he says to crowds at station stops. . . ." (pp. 240-242)

Railroads 100 Years Old 1945-1955, compiled by Harry G. Eddy, Bureau of Railway Economics Library, Association of American Railroads, 91 Mimeo. 1. A list of names of railroads which were chartered and built in the United States, or whose immediate successors built and opened sections of track between 1845 and 1855. Free on request to BRE Library, AAR, Washington 6, D. C. Note: Copies have been sent to members of The Lexington Group and Libraries on BRE Library mailing list.

The Railway Gauge Problem of Tropical Africa, by R. W. Foxlee. 2 mimeo. 1. Release of July 21, 1948 of The Institution of Civil Engineers, London, England. Editorial summary: "Preparing for gauge standardization in Africa" in *Railway Gazette*, July 23, 1948, p. 90.

Railway Preparedness—What our Rail Lines are Doing to Meet the Needs of Today and Tomorrow, by P. Harvey Middleton. cover-title, III, 22 pp. Published in June 1948 and available on request from Railway Business Association, Chicago 3, Illinois. ". . . This report in Part II describes the major items of the modernization and improvement programs of 33 Class I railways: . . ."

A Review of Railway Operations in 1947, by Julius H. Parmelee. 37 p. Special series bulletin no. 77, Bureau of Railway Economics,

Association of American Railroads, reprinted by permission from *Railway Age*, Jan. 3, 1948, with figures revised to April 1, 1948. "Prospects for 1948" pp. 33-34.

The South African Railways—History, Scope and Organization, prepared by the Public Relations Department, and published by authority of the General Manager, South African Railways, Johannesburg, Union of South Africa. 124 pp. Illus., Folded maps and diagrams. Free on request to General Manager, South African Railways, Johannesburg. ". . . The purpose of this book is to record and to present in a clear and easily accessible form the history and growth of the organisation which, in addition to railways, covers shipping, road motor services, ports and harbours, airways and a multitude of other subsidiary activities . . ." (p. 3). Reviewed by C. S. Duncan, economist, Association of American Railroads, cover-title, 9 mimeo, 1. Free on request to A. A. R., Washington 6, D. C.

Through all EUROPE from Paris, by French National Railroads, 610—Fifth Ave., New York 20. N. Y. cover-title, 72 p. incl. maps, charts, and illustrations. Includes condensed schedules of all main line Inter-European Railway Routes starting from Paris, as well as that of "Maroc Express" that began connections with Casablanca, Morocco, last June, and the international through trains: "Nord-Express"; "Orient Express" "Arlberg Express" and "Simplon-Orient Express".

Trains Annual, 1947, edited by Cecil J. Allen. cover-title, 104 p. London, England, Ian Allan, Ltd. 7 shillings 6 pence. ". . . The reception of *Trains Annual, 1947*, by the public . . . we must now leave it, will decide whether we shall be justified in building further units of the same class in 1948 and later years . . ." (p. 5)

Transportation Research in the Nation's Capital. Broadcast over WQW by librarians of 6 transportation libraries in Washington, D. C., who mentioned quite a number of others. 18 mimeo. 1. Free on request to Bureau of Railway Economics Library, Association of American Railroads, Washington 6, D. C. Note: Distributed to members of The Lexington Group.

The Universal Directory of Railway Officials and Railway Year Book 1948-49, compiled from official sources under the direction of The Editor of *The Railway Gazette*. 54th year of publication. 143 pp. This issue, published in July 1948, reflects many changes in organization of railways all over the world. Tables of mileages, data on railroads, air, sea, and road services, and a bibliography are, as usual, in the general information section. For sale by *The Railway Gazette*, 33, Tothill St., Westminster, London, S. W. 1, England. 30 shillings, 9 pence, postpaid.

The World's Railways and How They Work. 320 pp. incl. illus., and Maps: *Principal Railways of the British Isles*, p. 49; ". . . of Europe, pp. 116-117; ". . . of Asia, pp. 194-195; ". . . of Africa, p. 213; ". . . of Australia, pp. 228-229; ". . . of New Zealand, p. 241; *of United States of America*, pp. 276-277; ". . . of Canada, pp. 298-299; ". . . of South America, p. 305; ". . . of Mexico and Central America, p. 317. London, England, The Odhams Press, Limited. 8 shillings 6 pence.

ARTICLES IN PERIODICALS

Australian Railroad Gage Standardization Schedules, by Ralph H. Hunt. Foreign Commerce Weekly, June 26, 1948, p. 40. From 1951-1960 at cost of about £51,000,000.

Centenario del Ferrocarril. Ferroviarios, Madrid, Spain, in each 1948 issue. Illustrated articles on various celebrations of Spain's railroad centennial.

Freight Progress Number—1948. Railway Age, May 15, 1948. Detailed, illustrated accounts of freight service improvements.

French National Railways BoBo Locomotives—The Latest Version of a Numerous Class Will Be Used for Mixed-Traffic Services on the Forthcoming Paris-Lyons Electrification. Railway Gazette, July 16, 1948, p. 74. Illustration and diagram of leading dimensions. . . . The locomotive is built to work both passenger and freight trains. . . .

George Stephenson Centenary Commemoration. Railway Gazette, August 20, 1948, p. 222. Illus. Ceremonies at Chesterfield and Newcastle, England.

Inauguration of the Northern Transandine Railway. Railway Gazette, June 4, 1948, pp. 660-661, 666, with illus. and map. Editorial note: *New Route Across the Andes*, p. 646.

Midwest Engineer, Vol. 1, no. 1, September 1948—Published by The Western Society of Engineers, monthly, except June, July, and August, 2207 Dodge Ave., Evanston, Ill. Elbert Hubbard, editor. "Since 1898, the Society has published a "Journal" under several formats, which has been basically a journal of record of engineering material presented at WSE meetings . . . the [present] change in format is accompanied by a change in editorial policy which will make the Midwest Engineer reflect the broadened general aspect of the present Society . . ."

The Nakoura-Beirut-Tripoli Line. Bulletin of the International Union of Railways (U. I. C.), Paris XVII, France, May 1948, pp. 190-191. Map p. 190. . . . is the Lebanese section of the Haifa-Beirut Tripoli line constructed by the British Army for strategic purposes. The line was purchased in 1947 by the Lebanese government which entrusted its management to the Damas-Hama and Extensions Railway Company according to an operating convention dated 20th May, 1947. . . . almost entirely follows the coast line [of the Mediterranean]. . . .

New and Proposed Lines in Norway—Completion of projects now in hand will improve railway links in Norway, but many gaps in the system remain to be filled. Map.

One Hundred Years' Development of Railways in the Chicago Area. Parts I-II, by Samuel O. Dunn. Railway Age, September 11, 1948, pp. (509) 73-(511) 75; September 18, 1948, pp. (540) 58-(543) 61. His address to the Chicago meeting of the Newcomen Society, November 7, 1947, not published heretofore. . . . The Galena & Chicago Union, now part of the North Western, was the first railroad to enter Chicago. . . . on October 23, 1848 . . . When it is considered that, in 1848, Chicago was but a decade or so removed from the trading-post era and had suffered an Indian massacre only 35 years previously, the

building and operation of the little Galena road over the raw prairie was a real test. . . . the G. & C. U. was financed entirely with private capital by Chicago merchants and farmers of the surrounding country-side. . . . (p. (59) 73). . . . Roll Call of the Roads [with their dates of entry] (same page). . . . The Chicago Switching District is a phenomenon in the transportation world. Covering the city of Chicago and numerous suburbs . . . The district is approximately 40 miles in length and from 7 to 15 miles wide . . . —more than 600 square miles. It contains a network of more than 5,000 miles of track, which serve more than 4,000 industries having private sidings. . . ." (p. (511) 75).

Palestine Railways. Railway Gazette, July 2, 1948, pp. 3-4. Editorial summary of 1946-1947 report of General Manager A. F. Kirby. BRE Library hopes that its copy will arrive eventually. "Abnormal conditions in Palestine during the period covered by the report . . . make it impossible to measure traffic operation by normal standards. . . . A full list is given of the episodes of sabotage . . . which first necessitated railway traffic being confined to daylight hours. Casualties sustained by railway staff . . . totalled three killed and 66 injured, but these figures took no account of the military and police personnel who lost their lives in the course of protecting the railway or in removing mines. . . . The through passenger service and military troop trains to and from Egypt were retimed to provide for passage through Palestine in daylight, and local passenger services were suspended. Goods services . . . were operated as opportunity offered. . . ."

Railway Development in Iraq—A programme of railway extension, bridge building, and improvement of terminal facilities at Baghdad. . . . Railway Gazette, July 2, 1948, p. 16. ". . . part of the Iraqi five-year plan. . . ."

A railway Lifeline across Africa? by G. V. O. Bulkeley. Railway Gazette, July 23, 1948, pp. 98-99. An examination of three possible means of providing railway connections across Africa to avoid using the Cape sea route in time of war. Map, p. 99, shows mileage of existing African railways, with the three possible connections for trans-continental traffic discussed in Mr. Bulkeley's article. Editorial note: Preparing for Gauge Standardization in Africa, p. 90. ". . . necessary for 3 ft. 6 in. to be the controlling gauge. . . ."

Vagones de ejes intercambiables. Ferroviarios, Madrid, Spain, May 1948, pp. 3-4. Illustrations, diagrams, and "las caracteristicas principales" of freight cars now in service in international traffic in Europe over railroads of different gages. They are built with interchangeable axles that are adjusted at borders. How the brakes problem was solved to take care of Spanish and French requirements is described on p. 14.

LOCOMOTIVES OF THE CHICAGO & NORTH WESTERN RY.

For our members that own copies of our bulletin published under this title in 1938, the Chicago & North Western Ry. is offering a revised roster showing all additions and the scrapping of such locomotives as to bring this bulletin up to date. Published in 6 x 9 size so as to fit the former bulletin, it is offered to our members with the compliments of that road. Copies may be procured upon application made to our Resident Vice President, Mr. D. W. Yungmeyer, 5116 Dorchester Ave., Chicago, Illinois but, will you please enclose 6c for mailing and, as in the case of the C. B. & Q. publication, give Mr. Yungmeyer the month the bulletin was published in 1938.



